DOCUMENT RESUME

ED 237 359	SE 043 572
TITLE	Water Quality Instructional Resources Information System (IRIS). A Compilation of Abstracts to Water Quality and Water Resources Materials. Supplement XV.
INSTITUTION	Ohio State Univ., Columbus, Ohio. Information Reference Center for Science, Mathematics, and Environmental Education.
SPONS AGENCY	Environmental Protection Agency, Washington, D.C. Office of Water Programs.
PUB DATE	Oct 83
GRANT	EPA-T-901366010
NOTE	243p.
AVAILABLE FROM	EPA Instructional Resources Center, 1200 Chambers Rd., 3rd Floor, Columbus, OH 43212 (subscription $12.00, $4.00 ea.).
PUB TYPE	Reference Materials - Bibliographies (131)
EDRS PRICE	MF01/PC10 Plus Postage.
DESCRIPTORS	*Audiovisual Aids; Citizen Participation; Environmental Education; Indexes; Information Dissemination; *Instructional Materials; Pesticides; Postsecondary Education; Sludge; Technology; Waste Disposal; *Waste Water; Water; Water Pollution; *Water Quality; *Water Resources; *Water Treatment
IDENTIFIERS	Hazardous Materials

ABSTRACT

Compiled are abstracts and indexes to selected print and non-print materials related to wastewater treatment and water quality education and instruction, as well as materials related to pesticides, hazardous wastes, and public participation. Sources of abstracted/indexed materials include all levels of government, private concerns, and educational institutions. Title, author(s), publication date, cross-references, descriptors, and availability are provided for each entry. Also included are procedures to illustrate how instructors and curriculum developers in the water quality control field can locate instructional materials to meet very general or highly specific requirements of their programs. This publication supplements and does not replace "Water Quality Instructional Resources Information System (IRIS): A Compilation of Abstracts to Water Quality and Water Resources" or IRIS Supplements I-XIV. (JN)

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Water Quality Instructional Resources Information System

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WATER QUALITY INSTRUCTIONAL
RESOURCES INFORMATION SYSTEM (IRIS)

A Compilation of Abstracts
to Water Quality and Water
Resources Materials

Supplement XV (1983)
October, 1983

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

SE043572

Prepared by

EPA Instructional Resources Center
SMEAC Information Reference Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212

as part of
Grant No. T-901366010

WATER QUALITY INSTRUCTIONAL
RESOURCES INFORMATION SYSTEM (IRIS)

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This project has been financed (in part) with Federal funds from the U.S. Environmental Protection Agency, Office of Water Program Operations, under grant identification number T-901366010. The contents do not necessarily reflect the views and policies of the U.S. Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

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Preface

This publication contains abstracts and indexes to selected materials related to wastewater treatment and water quality education and instruction. In addition, some materials related to pesticides, hazardous wastes, and public participation are included. Also included are procedures to illustrate how instructors and curriculum developers in the water quality control field can locate instructional materials to meet very general or highly specific requirements in their programs.

Supplements to this publication will be issued periodically.

For further information about these materials contact:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212

(614) 422-6717

I. General Information about Materials in IRIS.

A. What types of materials are included in IRIS?

The EPA Instructional Resources Center (water) acquires, reviews, indexes, and announces both print (books, modules, units, etc.) and non-print (films slides, video tapes, etc.) materials related to water quality and water resources education and instruction.

Materials selected must be available from some source for announcement. When materials are not readily available we attempt to make the materials available through some national information service for easier acquisition. In a few cases the EPA Instructional Resources Center is the source of the materials.

B. How are materials entered into IRIS?

We request that people assist us in locating materials for the system. If you have materials you believe to be useful to others, please send two copies if possible to the:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212

Materials are reviewed by the project staff. Availability of the materials is checked, and the materials are abstracted and indexed. The abstract describes the contents of the material. The index terms (descriptors) are concepts or terms used to describe the contents and the form of the document. (See the Subject Index for a listing of those that have been used.) The index terms are useful for locating materials manually, such as with this compilation, and also by computer.

When items are processed they are entered on the IRIS (water) computer tape. This tape is maintained by the EPA Instructional Resources Center at The Ohio State University and is used for producing tapes for other information systems, publications, and for computer searches conducted at The Ohio State University.

C. How can a user locate materials in IRIS?

1. All materials placed in IRIS (water) collection.

   Materials entered into the IRIS (water) collection can be located in two ways: (1) by manual search of this compilation and similar ones to follow and (2) by computer.

The first compilation contained resumes of selected materials processed for the previous IRIS (water) collection and resumes of selected materials of items added to the IRIS (water) collection. A limited number of copies of the compilation in paper copy and microfiche are available free of charge as long as the supply lasts from the EPA Instructional Resources Center. After the free copies of the compilations are gone, copies will be available for purchase from the EPA Instructional Resources Center.

Quarterly updates of the compilation are available by subscription on a yearly basis beginning November, 1979. Information regarding an annual subscription to IRIS (water) Quarterly Compilations can be obtained by writing to the EPA Instructional Resources Center. A subscription to the quarterly supplements for 1983 is $12.00 (within the U.S.). Price to Canada and Mexico is $14.00. Prices in other Countries is $18.00. Separate quarterly supplements are $4.00 each.

The compilation and the quarterly supplements can be scanned and the subject index can be used for manual searches.

Computer tapes of the IRIS (water) collection can also be searched by both batch and on-line computer searches. The IRIS tapes are available for searching through the Bibliographic Retrieval Services, Inc., (BRS) and with Dialog. Any search service that currently subscribes to BRS or Dialog is able to search the IRIS data base by on-line techniques. Individuals or agencies with computer terminals and telephone connection equipment can subscribe to BRS or Dialog and do their own searches if they desire.

Information regarding BRS may be obtained by writing or phoning BRS, 1200 Route 7, Latham, NY 12110, (518) 783-1161.

Information regarding Dialog may be obtained by writing or phoning Dialog Information Retrieval Service, 3460 Hillview Avenue, Palo Alto, CA 94304, (415) 858-3775.

Plans are being made to mount IRIS tapes with other on-line vendors. Information regarding this service will be announced in a future EPA IRC Bulletin and in mailings from the EPA Instructional Resources Center.

2. Materials placed in the Educational Resources Information System (ERIC)

A number of the materials processed for the IRIS (water) system are entered into the ERIC system and announced in Resources in Education (RIE). Resources in Education (RIE) is published monthly and is available from:

Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402
(202) 783-3238

The current price is listed in the most recent issue of RIE. Check if a college or university library close to you has a copy. If they do not, contact the EPA Instructional Resources Center for assistance.

Many libraries subscribe to RIE. Materials announced in RIE can be searched manually each month by scanning RIE or by checking the index terms in the back of each issue. Materials announced in RIE can be searched by computer also. ERIC computer tapes may be purchased outright, but most users of the tapes gain access to them through three major database vendors: Dialog, Systems Development Corporation (Orbit), and Bibliographic Retrieval Services. For the addresses of search services in your state that can search these databases, contact the:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212
(614) 422-6717

Most of the materials announced in RIE are available on microfiche (microfilm) at over 700 sites throughout the United States and the world. Users can view these materials on site at many locations to identify what they believe will be useful to them at no cost. Microfiche copies (or in most cases Xerox copies) can be ordered through the ERIC Document Reproduction Service. The address and order information is in the back of each issue of RIE. Xerox copies of many items related to water quality and resource education and training can also be ordered through the EPA Instructional Resources Center for $0.03 per page plus $1.00 per document.

For information about locations of ERIC microfiche sites in your state, contact the EPA Instructional Resources Center.

A number of journal articles processed for the IRIS (water) system are entered into the ERIC system and announced in Current Index to Journals in Education (CIJE).

Current Index to Journals in Education is published monthly and is available from:

ORYX Press
2214 North Central at encanto
Phoenix, Arizona 85004
(602) 254-6156

Many libraries subscribe to CIJE. Materials announced in CIJE can be searched manually each month by scanning CIJE or by checking the index terms in the back of each issue. Materials announced in CIJE can be searched by computer also. Refer to the previous discussion of RIE concerning computer searches.

Materials announced in CIJE can be located in journals at many university libraries.

Many of the articles can be obtained from University Microfilms. Current prices are $8.00 per article and $10.00 for articles dated prior to January 1981. For further information write to:

UMI Article Reprint Department
300 North Zeeb Road
Ann Arbor, Michigan 48106
(800) 521-0600

II. How to Use the Compilation

A. Description of Information in Resumes

Each resume is listed by EW number in numerical order in the resume section. Two samples of resumes are provided to explain the data fields in the resumes. Sample resume #1 is a sample resume of an item not entered into ERIC. Sample resume #2 is a sample resume of an item entered into ERIC; a few additional data elements are in these resumes and are explained.

1. Sample resume of materials not entered in ERIC

   a. IRIS NUMBER: EW006023
   b. PUBLICATION DATE: FEB 81
   c. TITLE: PROGRAMMED APPROACH TO WATER/MASS ANALYSES.
   d. PERSONAL AUTHOR: SPENCE, GEORGE R., JR.
   e. DESCRIPTOR: *DESIGN; *ENGINEERING; *EQUIPMENT; *MASS BALANCE; *PROJECT DESIGN; *POLLUTION ENGINEERING; *PIPES; *WATER RESOURCES

   f. DESCRIPTIVE NOTE: 30-33P.
   g. ABSTRACT: DURING THE ENGINEERING PHASE OF A PROJECT DESIGN, WATER REQUIREMENTS OFTEN CHANGE AS NEW INFORMATION BECOMES AVAILABLE. THIS ARTICLE DETAILS A PROGRAMMED APPROACH TO CALCULATION OF A WATER/MASS BALANCE WHICH PROVIDES THE USER WITH THE ABILITY TO READILY ASSESS THE IMPACT OF VARYING WATER QUALITIES, FLOW PATTERNS, AND FLOW RATES. THIS INFORMATION IS THEN USED IN DETERMINING PIPE AND EQUIPMENT SIZES.

   h. AVAILABILITY: POLLUTION ENGINEERING; V13 N2

   a. IRIS NUMBER -- this is the identification number sequentially assigned to materials as they are processed. Gaps in numbers mean that some items have been deleted, are being processed to add new information, or have been delayed in processing for some reason.

   b. PUBLICATION DATE -- date material was published according to information on the material.

   c. TITLE

   d. PERSONAL AUTHOR -- person or persons who wrote, compiled, or edited the material. Up to two personal authors can be listed.

   e. DESCRIPTOR -- subject terms which characterize substantive contents and form of the materials. The major terms are preceeded by an asterisk. Terms used to index all resumes in this compilation can be reviewed in the Subject Index.

   f. DESCRIPTIVE NOTE -- various items of information may be contained in this section. For print materials the number of pages is usually listed. The price of the material quoted is the last time information was received from the source. Please note: Prices of nearly all materials are subject to changes and may not be accurate at the time a person orders a specific item.

g. ABSTRACT -- some early materials entered into IRIS did not have abstract information. All materials currently being entered into IRIS have an informative abstract that describes the contents of the item.

h. AVAILABILITY -- information in this field indicates where the material can be obtained.

2. Sample resume of material entered into ERIC (Resources in Education)

Items entered into ERIC (Resources in Education) will have a few additional data fields.

IRIS ACCESSION NUMBER: EW006664
PUBLICATION DATE: 80
TITLE: RESOURCE DEVELOPMENT OF WATERSHED LANDS: A SIX WEEK SHORT COURSE.
DESCRIPTOR: ADMINISTRATION; ECOLOGICAL FACTORS; ECONOMIC FACTORS; INSTRUCTIONAL MATERIALS; *LAND USE; NATURAL RESOURCES; *POST SECONDARY EDUCATION; *TECHNICAL EDUCATION; *WATER RESOURCES; HYDROLOGY; NATURAL RESOURCES MANAGEMENT; WATER QUALITY; *WATERSHEDS

b. DESCRIPTIVE NOTE: EDRS PRICE: MF01 PLUS POSTAGE-NOT AVAILABLE IN HARD COPY DUE TO MARGINAL LEGIBILITY OF ORIGINAL DOCUMENT.

ABSTRACT: THIS COURSE WAS DESIGNED TO PROVIDE THE WATER RESOURCE TECHNICIAN OR MANAGER WITH INFORMATION WHICH WILL AID IN THE IMPLEMENTATION OF IMPROVEMENTS OF PRESENT LAND USE PRACTICES AND TO ILLUSTRATE ALTERNATIVE CONCEPTS AND TECHNIQUES IN LAND AND WATER USE FOR INCREASING AND IMPROVING THE MULTIPLE PRODUCTS OF
a. WATERSHED LANDS. (ED 197 941)

AVAILABILITY: ERIC DOCUMENT REPRODUCTION SERVICE, P. O. BOX 190, ARLINGTON, VA 22210

a. ERIC NUMBER -- the ED number indicates the document has been processed and entered into Resources in Education. This identification number is the number to use when ordering a document or when requesting information about a document.

b. EDRS PRICE — if material is available through the ERIC Document Reproduction Service, the price of the material when it was entered into the ERIC system and the form of the material is indicated. "MF" means microfiche; "HC" means Xerox copy. Prices are subject to change. Current prices of microfiche and paper copies are listed in the back of each issue of Resources in Education; consult the latest monthly issue for current prices. Information about ordering items can be obtained by contacting:

ERIC Document Reproduction Service (EDRS)
P. O. Box 190
Arlington, Virginia 22210
(703) 841-1212

Items that are available on microfiche (MF) are contained in microfiche collections at over 700 sites where they can be read. For information on the microfiche locations in your state contact the EPA Instructional Resources Center.

B. How to Locate Desired Materials

Users can identify materials of interest by scanning the resume listings, or using the Subject Index or Author Index.

1. Subject Index

The Subject Index is designed to enable the user to search for information on either a broad subject or a narrow information concern. An EW number is included for each item listed under the subject heading. The EW number refers to the abstract entry in the resume section where complete bibliographic information, an abstract of the item, and availability information can be found.

A user can also coordinate a search by checking EW numbers that appear under two or more subject headings. For example, you could check all the EW numbers under Water Treatment and all the EW numbers under Films. EW numbers included under both subject headings would include information relevant to Water Treatment that were films. EW numbers under wastewater treatment and laboratory techniques would provide a list of materials related to Laboratory Techniques and to Wastewater Treatment. Similar techniques could be used to identify other information desired.

Users with ERIC microfiche should check the resume entry. If the document is available on microfiche from the ERIC Document Reproduction Service, the availability will be indicated by "MF" on the resume by "EDRS Price." This means libraries with ERIC microfiche collections should have the document on microfiche.

If you want a document available through the ERIC Document Reproduction Service (EDRS) see the section on ordering documents.

2. Author Index

If you desire to locate a document by the name of the author, you can use the Author Index. EW numbers are provided under the author in the Author Index as in the Subject Index. Some documents do not have a listed author; hence, they are not listed in this index.

III Correcting an Existing IRIS Record

The IRIS data base will be updated on a quarterly basis. Corrections will be made to the data base at those times. You can help improve IRIS by sending corrections for items you find to be in error.

We request that you duplicate (copy) the resume from the compilation, mark the information you believe to be wrong (or incomplete), and send the marked resume to:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212
(614) 422-6717

Corrections of errors will occur in the IRIS tapes at the next update after comments are received.

If you have difficulty obtaining materials from the listed source in the AVAILABILITY section of the resume, please let us know. We will contact the sources to verify whether the materials are available, but your assistance will provide corrections between annual availability checks.

If you are the supplier of materials in IRIS, please let us know if you remove a product from your list, modify a product on your list, or change the price of the product.

IV. Requests to Receive Information about IRIS and the IRC Bulletin

Information regarding IRIS, materials in IRIS, and modifications in the system will be announced in the IRC Bulletin. The Bulletin is issued about six times a year as information is available.

If you are not on the mailing list write to the EPA Instructional Resources Center. Limited numbers of some back issues are still available.

If you need information about IRIS you can also phone (614) 422-6717 with your questions.

V. Requests for Assistance in Using IRIS

A. Assistance in use of IRIS manuals
If you need help in using the IRIS manuals, phone (614) 422-6717 or write to the EPA Instructional Resources Center. Staff are normally available from about 8:30 a.m. to 4:30 p.m. Eastern time to answer your questions.

B. Assistance in accessing IRIS by computer

1. Conducting searches.

   See section VIII.

2. Subscribing to BRS, Inc. for computer searching of IRIS.

   Contact: Bibliographic Retrieval Services, Inc.
   1200 Route 7
   Latham, New York 12110
   (518) 783-1161

3. Subscribing to Dialog for computer searching of IRIS.

   Contact: Dialog Information Retrieval Service
   3460 Hillview Avenue
   Palo Alto, California 94304
   (415) 858-3775

4. Contacting a computer search service (an agency that will conduct a search for you, usually for a fee.)

   The EPA Instructional Resources Center maintains a list of agencies that can conduct searches. Most charge a fee, though some are free to qualified users in a limited geographical area.

   Phone or write to obtain information for your area.

VI. How to Locate Other Relevant Educational Materials

A number of people have requested information related to such areas as management, basic skills (reading, mathematics, writing) human relations, contract negotiations, and other topics. The EPA Instructional Resources Center plans to develop some user service products in selected areas in 1982.

Another excellent source of information for many educational concerns is the ERIC System.

ERIC is a national information system designed and developed by the U.S. Office of Education, and now supported and operated by the National Institute of Education (NIE), for providing ready access to descriptions of exemplary programs, research and development efforts, and related information that can be used in developing more effective educational programs.

There are 16 Clearinghouses in the nationwide ERIC network. Each specializes in a different, multi-discipline, educational area. Each searches out pertinent documents.

The ERIC Clearinghouses have responsibility within the network for acquiring the significant educational literature within their particular areas, selecting the highest quality and most relevant material, processing (i.e., cataloging, indexing, abstracting) the selected items for input to the data base, and also for providing information analysis products and various user services based on the data base.

The 16 ERIC Clearinghouses are listed on the next few pages, together with addresses, telephone numbers, and brief scope notes describing the areas they cover. You can contact them for assistance in locating information relevant to their scope notes.

A. ERIC Clearinghouse on Adult, Career, and Vocational Education
The Ohio State University
National Center for Research in Vocational Education
1960 Kenny Road
Columbus, Ohio 43210
Telephone: (614) 486-3655

Career education, formal and informal at all levels, encompassing attitudes, self-knowledge, decision-making skills, general and occupational knowledge, and specific vocational and occupational skills; adult and continuing education, formal and informal, relating to occupational, family, leisure, citizen, organizational, and retirement roles; vocational and technical education, including new sub-professional fields, industrial arts, and vocational rehabilitation for the handicapped.

B. ERIC Clearinghouse on Counseling and Personnel Services
University of Michigan
School of Education, Room 2108
Ann Arbor, Michigan 48109
Telephone: (313) 764-9492

Preparation, practice, and supervision of counselors at all educational levels and in all settings, theoretical development of counseling and guidance, use and results of personnel procedures such as testing, interviewing, disseminating, and analyzing such information, group work and case work; nature of pupil, student, and adult characteristics; personnel workers and their relation to career planning, family consultations, and student orientation activities.

C. ERIC Clearinghouse on Elementary and Early Childhood Education
University of Illinois
College of Education
805 West Pennsylvania Avenue
Urbana, Illinois 61801
Telephone: (217) 333-1386

Prenatal factors, parental behavior; the physical, psychological, social, educational, and cultural development of children from birth through the primary grades; educational theory, research and practice related to the development of young children.

D. ERIC Clearinghouse on Educational Management
University of Oregon
Library, Room 108
Eugene, Oregon 97403
Telephone: (503) 686-5043

Leadership, management, and structure of public and private educational organizations; practice and theory of administration; preservice and inservice preparation of administrators, tasks and processes of administration, methods and varieties of organization, organizational change, and social context of the organization.

Sites, buildings, and equipment for education; planning, financing, constructing, renovating, equipping, maintaining, operating, insuring, utilizing, and evaluating educational facilities.

E. **ERIC Clearinghouse on Handicapped and Gifted Children**
Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091
Telephone: (703) 620-3660

Aurally handicapped, visually handicapped, mentally handicapped, physically handicapped, emotionally disturbed, speech handicapped, learning disabilities, and the gifted; behavioral, psychomotor, and communication disorders, administration of special education services; preparation and continuing education of professional and paraprofessional personnel; preschool learning and development of the exceptional; general studies on creativity.

F. **ERIC Clearinghouse on Higher Education**
George Washington University
One Dupont Circle, NW, Suite 630
Washington, DC 20036
Telephone: (202) 296-2597

Various subjects relating to college and university students, college and university conditions and problems, college and university programs; curricular and instructional problems and programs, faculty, institutional research; federal programs, professional education (medical, law, etc.), graduate education, university extension programs, teaching-learning, planning, governance, finance, evaluation, interinstitutional arrangements, and management of higher educational institutions.

G. **ERIC Clearinghouse on Information Resources**
Syracuse University
School of Education
Huntington Hall
150 Marshall Street
Syracuse, New York 13210
Telephone: (315) 423-3640

Management, operation, and use of libraries; the technology to improve their operation and the education, training, and professional activities of librarians and information specialists. Educational techniques involved in microteaching, systems analysis, and programmed instruction employing audiovisual teaching aids and technology, such as television, radio, computers, and cable television, communication satellites, microforms, and public television.

H. ERIC Clearinghouse for Junior Colleges
University of California at Los Angeles (UCLA)
Mathematical Sciences Building, Room 8118
405 Hilgard Avenue
Los Angeles, California 90024
Telephone: (213) 825-3931

Development, administration, and evaluation of public and private community junior colleges. Junior college students, staff, curricula, programs, libraries, and community services.

I. ERIC Clearinghouse on Languages and Linguistics
Center for Applied Linguistics
3520 Prospect Street, NW
Washington, DC 20007
Telephone: (202) 298-9292

Languages and linguistics. Instructional methodology, psychology of language learning, cultural and intercultural content, application of linguistics, curricular problems and developments, teacher training and qualifications, language sciences, psycholinguistics, theoretical and applied linguistics, language pedagogy, bilingualism, and commonly taught languages including English and speakers of other languages.

J. ERIC Clearinghouse on Reading and Communication Skills
National Council of Teacher of English
1111 Kenyon Road
Urbana, Illinois 61801
Telephone: (217) 328-3870

Reading, English, and communication skills, preschool through college. Educational research and development in reading, writing, speaking, and listening. Identification, diagnosis, and remediation of reading problems. Speech communication--forensics, mass communication, interpersonal and small group interaction, interpretation, rhetorical and communication theory, instruction development, speech sciences, and theater. Preparation of instructional staff and related personnel in these areas.

All aspects of reading behavior with emphasis on physiology, psychology, sociology, and teaching. Instructional materials, curricula, tests and measurement, preparation of reading teachers and specialists, and methodology at all levels. Role of libraries and other agencies in fostering and guiding reading. Diagnostic and remedial services in school and clinical settings.

K. ERIC Clearinghouse on Rural Education and Small Schools
New Mexico State University
Box 3AP
Las Cruces, New Mexico 88003
Telephone: (505) 646-2623

Education of Indian Americans, Mexican Americans, Spanish Americans, and migratory farm workers and their children; outdoor education; economic, cultural, social, or other factors related to educational programs in rural areas and small schools; disadvantaged of rural and small school populations.

L. ERIC Clearinghouse for Science, Mathematics and Environmental Education
The Ohio State University
1200 Chambers Road - Room 310
Columbus, Ohio 43212
Telephone: (614) 422-6717

All levels of science, mathematics, and environmental education; development of curriculum and instructional materials; media applications; impact of interest, intelligence, values, and concept development upon learning; preservice and inservice teacher education and supervision.

M. ERIC Clearinghouse for Social Studies/Social Science Education
Social Science Education Consortium, Inc.
855 Broadway
Boulder, Colorado 80302
Telephone: (303) 492-8434

All levels of social studies and social science; all activities relating to teachers; content of disciplines; applications of learning theory, curriculum theory, child development theory, and instructional theory; research and development programs; special needs of student groups; education as a social science; social studies/social science and the community.

N. ERIC Clearinghouse on Teacher Education
American Association of Colleges for Teacher Education (AACTE)
One Dupont Circle, NW, Suite 610
Washington, DC 20036
Telephone: (202) 293-2450

School personnel at all levels, all issues from selection through preservice and inservice preparation and training to retirement; curricula, educational theory and philosophy; general education not specifically covered by Educational Management Clearinghouse; Title XI NDEA Institutes not covered by subject speciality in other ERIC Clearinghouses; all aspects of physical education.

O. ERIC Clearinghouse on Tests, Measurement, and Evaluation
Educational Testing Service (ETS)
Rosedale Road
Princeton, New Jersey 08541
Telephone: (609) 734-5176

Tests and other measurement devices; evaluation procedures and techniques; application of tests, measurement, or evaluation in educational projects of programs.

P. ERIC Clearinghouse on Urban Education
Teachers College, Columbia University
Institute for Urban and Minority Education
Box 40
525 West 120th Street
New York, New York 10027
Telephone: (212) 678-3433

The relationship between urban life and schooling; the effect of urban experiences and environments from birth onward; the academic, intellectual, and social performance of urban children and youth from grade three through college entrance (including the effect of self concept, motivation, and other affective influences), education of urban, Puerto Rican and Asian American populations, and rural and urban black populations; programs and practices which provide learning experiences designed to meet the special needs of diverse populations served by urban schools and which build upon their unique as well as their common characteristics, structural changes in the classroom, school, school system, and community and innovative instructional practices which directly affect urban children and youth; programs, practices, and materials related to economic and ethnic discrimination, segregation, desegregation, and integration in education; issues, programs, practices, and materials related to redressing the curriculum imbalance in the treatment of ethnic minority groups.

Q. Educational Resources Information Center
Central ERIC
National Institute of Education (NIE)
Information Resources Division
1200 - 19th Street, NW
Washington, DC 20208
Telephone: (202) 254-5500

There are other sources of educational information in many states. Included are information dissemination units in the state departments of education, intermediate education units, and local education units. In many cases, a local school administrator or school librarian can help you locate assistance.

VII. How to Structure a Computer Search of IRIS

This explanation relates to the IRIS data base that can be searched on-line through Bibliographic Retrieval Services, Inc. or Dialog. As IRIS becomes available through other sources, information relevant to those services will be provided.

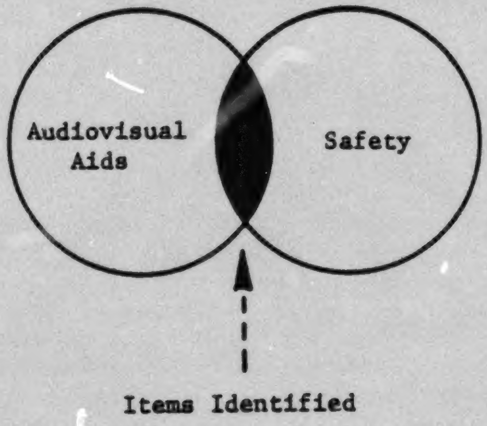
A few notes about the service are important. The following fields are searchable by computer: (1) IRIS Accession Number (EW Number), (2) ERIC Accession Number (ED Number), (3) Authors, (4) Institution, (5) Title, (6) Subject index terms, and (7) Abstracts.

If you submit a search of IRIS through BRS or Dialog, the program will search for the words you select in three fields unless the searcher requests to limit the search. These fields are: (1) title field, (2) subject index field, and (3) abstract. We recommend you use this feature especially for searches on specific terms. If you find more material than you want by this techniqu, you can narrow the search to items that may have the most information on the topic by limiting the search to the subject index field.

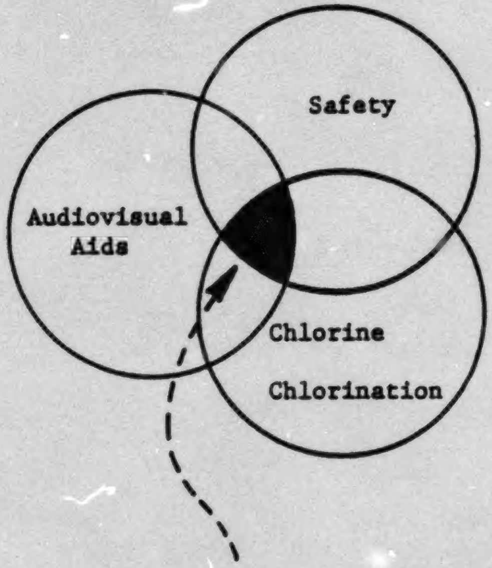
Several sample searches are listed below and on the following pages.

A. Sample 1

If you want to locate audiovisual aids that relate to safety you would submit a search with audiovisual aids and safety. Materials that included the terms both audiovisual aids and safety in the title field, the abstract and the subject index field would be identified by computer.



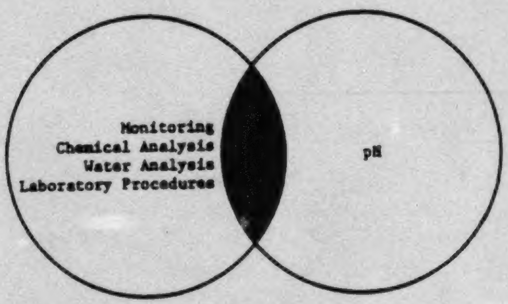
The computer program can tell you the number of items, the title of the items, or print the entire resume of each item. If you were primarily interested in audiovisual aids, safety, and chlorine you would submit a search of these three terms. You might want to include chlorides and chlorination as well as chlorine in the search. This search would identify materials that contained audiovisual aids, safety, and one or more of the words, chlorine and chlorination.


Safety
Audiovisual Aids
Chlorine
Chlorination

Items Identified

B. Sample 2

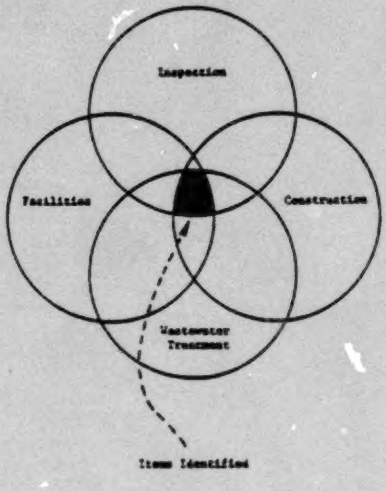
If you want to identify materials related to monitoring, you should include several related terms and the chemical, material, or situation that is being monitored. See the example below.


Monitoring
Chemical Analysis
Water Analysis
Laboratory Procedures
pH

This search would identify all the items that included any of the terms on the left and pH.

C. Sample 3

If you are interested in materials related to inspection and construction you could conduct a search of these two terms. The search would identify all materials that included both terms. If you were interested in only wastewater treatment facilities you could construct a search as diagrammed.



This search would yield specific materials and demonstrates how a computer search can help you locate materials you want.

The subject index can also be used to help you select words to include in a search. Words listed in the subject index are certain to be in the searchable fields. Therefore, selecting these terms to use in structuring a search will increase the probability of locating materials. Some words will appear in the title or abstract that are not included in the subject term field. Such words can be used to check if any materials are in the data base. If, however, you conduct a search with such a word it is usually best to include a synonym that is in the subject index.

VIII. How to Order Materials

The AVAILABILITY field in the resume indicates where materials can be obtained. A few of the sources are explained.

A. A number of audiovisual materials can be obtained on loan or purchased from the EPA Instructional Resources Center. Most items previously available from the NTOTC office are available from the EPA Instructional Resources Center at The Ohio State University. For further information write or call.

B. Some of the materials are available through the ERIC Document Reproduction Service. MF (microfiche) are 4" x 6" sheets of microfilm; up to 96 pages of text can be reproduced on one sheet. HC (paper copy) is a reproduction of the document in paper form at the original size.

Order forms for these materials can be obtained from:

ERIC Document Reproduction Service
P. O. Box 190
Arlington, Virginia 22210
(703) 841-1212

C. The EPA Instructional Resources Center will provide Xerox copies of materials that are not copyrighted for $1.00 per document plus $0.03 per page.

If you can not obtain materials that are listed or have difficulty obtaining materials, please contact the EPA Instructional Resources Center. We can provide assistance in obtaining materials from some sources. If materials become unavailable, we will remove them from the IRIS data base.

RESUME SECTION

IRIS ACCESSION NUMBER: EW008629
PUBLICATION DATE: DEC 77

TITLE: SEWER SYSTEM EVALUATION, REHABILITATION AND NEW CONSTRUCTION - A MANUAL OF PRACTICE.

DESCRIPTOR: CONSTRUCTION; DESIGN; *INFILTRATION; *INFLOW; INSPECTION; MANUALS; MAINTENANCE; *PERFORMANCE EVALUATION; *SEWERS; *SEWER REHABILITATION; SURVEYS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 178P. PRICE: $1.00 PER DOCUMENT PLUS $0.03 PER PAGE.

ABSTRACT: THIS MANUAL OF PRACTICE WAS PREPARED AS A READY REFERENCE FOR PEOPLE CONCERNED WITH IDENTIFICATION AND CONTROLLING INFILTRATION/INFLOW (I/I). THE MANUAL DISCUSSES THREE MAIN TOPICS: SEWER SYSTEM EVALUATION, SEWER REHABILITATION, AND DESIGN OF NEW SYSTEMS TO MINIMIZE INFILTRATION AND INFLOW.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW008631

PUBLICATION DATE: 79

TITLE: 1979 NATIONAL PRETREATMENT SYMPOSIUM PROCEEDINGS.

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *ECONOMICS; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); *PRETREATMENT; *SLUDGE; *WASTE DISPOSAL; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 174P.

ABSTRACT: THIS PUBLICATION IS THE RESULT OF A THREE-DAY SYMPOSIUM ON WASTEWATER PRETREATMENT HELD IN 1979. SECTIONS IN THE PUBLICATION CONSIDER ECONOMICS OF INDUSTRIAL WASTEWATER CONTROL, TECHNICAL CONSIDERATIONS IN ACHIEVING PRETREATMENT STANDARDS, TECHNICAL CONSTRAINTS TO EFFECTIVE INDUSTRIAL WASTEWATER CONTROL, AND SLUDGE DISPOSAL. EACH SECTION INCLUDES BRIEF PAPERS RELATED TO THE TOPIC.

AVAILABILITY: ASSOCIATION OF METROPOLITAN SEWERAGE AGENCIES, 1015 - 18TH STREET, N.W., WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW008632

PUBLICATION DATE: 79

TITLE: PRETREATMENT PROGRAM IMPLEMENTARION: CAN IT REALLY BE DONE?

DESCRIPTOR: *CALIFORNIA; *CASE STUDIES; *FACILITIES; *ILLINOIS; *INDUSTRIAL WASTES; *MASSACHUSETTS; *OPERATIONS (WASTEWATER); *PRETREATMENT; *PROGRAM DESCRIPTIONS; *PROGRAM EVALUATION; *TENNESSEE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 212P.
ABSTRACT: THIS PUBLICATION CONTAINS CASE STUDY ANALYSES FOR DEVELOPMENT OF INDUSTRIAL-MUNICIPAL WASTEWATER PRETREATMENT PROGRAMS IN FOUR AREAS. INCLUDED ARE STUDIES OF CHATTANOOGA (TENNESSEE), ROCKFORD (ILLINOIS), OAKLAND (CALIFORNIA), AND NEW BEDFORD (MASSACHUSETTS). REPORTS INCLUDE OVERVIEWS, IMPLEMENTATION INFORMATION, AND A SUMMARY OF KEY ELEMENTS FOR SUCCESSFUL PRETREATMENT PROGRAM DEVELOPMENT.

AVAILABILITY: WATER PLANNING DIVISION, OFFICE OF WATER AND HAZARDOUS MATERIALS, ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW008635

PUBLICATION DATE: 80

TITLE: OXYGEN DEMAND, CHEMICAL - 8000.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICAL OXYGEN DEMAND; *LABORATORY PROCEDURES; *OXYGEN; *SAMPLING; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: 5P. FREE TECHNICAL LITERATURE

ABSTRACT: DESCRIBED IS AN ANALYTICAL TECHNIQUE FOR CHEMICAL OXYGEN DEMAND FOR WATER AND WASTEWATER. INFORMATION IS ALSO PROVIDED FOR SAMPLING, STORAGE, AND HANDLING OF CHEMICALS.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW008636

PUBLICATION DATE: 81

TITLE: BACTERIA, TOTAL AND FECAL COLIFORM.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BACTERIA; *COLIFORM BACTERIA; *LABORATORY PROCEDURES; *MICROBIOLOGY; *SAMPLING; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: 14P. FREE TECHNICAL LITERATURE

ABSTRACT: DESCRIBED ARE ANALYTICAL TECHNIQUES FOR DETERMINING TOTAL AND FECAL COLIFORM BACTERIA USING THE MULTIPLE TUBE FERMENTATION TECHNIQUE FOR WATER AND WASTEWATER. DESCRIBED ARE VARIOUS ASPECTS OF THE PROCEDURE INCLUDING SAMPLING, HANDLING, AND ANALYTICAL TECHNIQUES.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW008637
PUBLICATION DATE: 79

TITLE: ZINC - 8009.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *LABORATORY PROCEDURES; *SAMPLING; *WASTEWATER; *WATER; *ZINC

DESCRIPTIVE NOTE: 3P. FREE TECHNICAL LITERATURE.

ABSTRACT: DESCRIBED IS AN ANALYTICAL TECHNIQUE FOR DETERMINING ZINC IN WATER AND WASTEWATER. SAMPLING, STORAGE, AND HANDLING OF CHEMICALS ARE ALSO DISCUSSED.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW008638

PUBLICATION DATE: 82

TITLE: OXYGEN DEMAND, BIOCHEMICAL - 8043.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BOD; *BIOLOGICAL OXYGEN DEMAND; *LABORATORY PROCEDURES; *OCEANS; *SEA WATER; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: 7P. FREE TECHNICAL LITERATURE.

ABSTRACT: DESCRIBED IS AN ANALYTICAL PROCEDURE FOR DETERMINING BIOCHEMICAL OXYGEN DEMAND. INFORMATION IS INCLUDED ON SAMPLING, STORAGE, AND HANDLING OF CHEMICALS.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW008640

PUBLICATION DATE: 81

TITLE: HARDNESS, TOTAL - 8030.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *HARDNESS; *LABORATORY PROCEDURES; *SEA WATERS; *WASTEWATER; *WATER; *WATER QUALITY

DESCRIPTIVE NOTE: 10P. FREE TECHNICAL LITERATURE.

ABSTRACT: DESCRIBED IS A PROCEDURE FOR DETERMINING TOTAL HARDNESS OF WATER. THE DISCUSSION INCLUDES SELECTION OF THE PROPER ANALYTICAL METHOD AND HANDLING OF SOME OF THE CHEMICALS.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW008641
PUBLICATION DATE: 79

TITLE: MANGANESE - 8034.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *LABORATORY PROCEDURES; *MANGANESE; *SAMPLING; *WATER

DESCRIPTIVE NOTE: 7P. FREE TECHNICAL LITERATURE.

ABSTRACT: DESCRIBED IS A TEST FOR MANGANESE IN WATER. THE TECHNIQUE DESCRIBED IS THE PERIODATE OXIDATION METHOD. THE DISCUSSION INCLUDES SAMPLING, STORAGE, AND HANDLING OF SOME OF THE CHEMICALS.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW008642

PUBLICATION DATE: 82

TITLE: PHOSPHORUS, REACTIVE (ORTHOPHOSPHATE) - 8048.

DESCRIPTOR: *AMINO ACID METHOD; *ANALYTICAL TECHNIQUES; *LABORATORY PROCEDURES; *PHOSPHORUS; *SAMPLING; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: 10P. FREE TECHNICAL LITERATURE.

ABSTRACT: DESCRIBED IS AN ANALYTICAL TECHNIQUE FOR DETERMINATION OF REACTIVE PHOSPHOROUS IN WATER AND WASTEWATER. SAMPLING, STORAGE, AND HANDLING OF CHEMICALS ARE DISCUSSED.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW008643

PUBLICATION DATE: 81

TITLE: IRON, FERROUS - 8032.

DESCRIPTOR: *ANALYTICAL TECNNIQUES; *FERROUS IRON; *IRON; *LABORATORY PROCEDURES; OCEANOGRAPHY; *SAMPLING; *SEA WATER; *WATER

DESCRIPTIVE NOTE: 11P. FREE TECHNICAL LITERATURE.

ABSTRACT: DESCRIBED IS A TECHNIQUE FOR DETERMINING FERROUS IRON AND TOTAL IRON IN WATER AND SEA WATER. INFORMATION IS INCLUDED ON SAMPLING, STORAGE, AND HANDLING OF SOME CHEMICALS.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW008644
PUBLICATION DATE: 82

TITLE: MEMBRANE FILTER TECHNIQUES FOR COLIFORM - 8074.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BACTERIA; *COLIFORMS; *LABORATORY PROCEDURES; *MEMBRANE FILTER TECHNIQUE; *MICROBIOLOGY; *SAMPLING; *WASTEWATER; *WATER; *WATER QUALITY

DESCRIPTIVE NOTE: 8P. FREE TECHNICAL LITERATURE.

ABSTRACT: DESCRIBED IS THE MEMBRANE FILTER TECHNIQUE FOR DETERMINING COLIFORM POPULATIONS IN WATER AND WASTEWATER. DIRECTIONS FOR SAMPLING, PREPARATION OF MATERIALS, AND ANALYSIS ARE INCLUDED.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW008815

PUBLICATION DATE: SPR 83

TITLE: DECREASING BLOCK WATER RATE STRUCTURE.

PERSONAL AUTHOR: NOVICK, ROBERT

DESCRIPTOR: *CALCULATOR PROGRAMS; *CALCULATORS; *COSTS; *CALCULATOR APPLICATIONS; *WATER COSTS; *WATER RATES
DESCRIPTIVE NOTE: 7P.

ABSTRACT: THIS PROGRAM IS FOR DETERMINING WATER COSTS FOR A DECREASING BLOCK RATE STRUCTURE. IT IS WRITTEN FOR USE ON THE HP-41C CALCULATOR.

AVAILABILITY: UNI-BELL PVC PIPE NEWS; V6 N1

IRIS ACCESSION NUMBER: EW008816

PUBLICATION DATE: SPR 83

TITLE: CALCULATING PVC PRESSURE RATINGS USING THE ISO EQUATION.

PERSONAL AUTHOR: NESBEITT, WILLIAM D.

DESCRIPTOR: *CALCULATORS; *CALCULATOR APPLICATIONS; *CALCULATOR PROGRAMS; *PIPE PRESSURE RATINGS; *PVC PIPES

DESCRIPTIVE NOTE: 8P.

ABSTRACT: THIS CALCULATOR PROGRAM IS WRITTEN FOR THE TI-58 OR TI-59. THE PROGRAM IS DESIGNED FOR CALCULATING PVC PIPE PRESSURE RATINGS USING THE INTERNATIONAL STANDARDS ORGANIZATION (ISO) EQUATION R161-1960.

AVAILABILITY: UNI-BELL PVC PIPE NEWS; V6 N1

IRIS ACCESSION NUMBER: EW008916
PUBLICATION DATE: 81

TITLE: YOU CAN BE A LEADER.

PERSONAL AUTHOR: SOLOMON, BEN; BOWERS, ETHEL MAY

DESCRIPTOR: *LEADERSHIP; *MANAGEMENT; *SUPERVISION

DESCRIPTIVE NOTE: 157P. PRICE: $5.90.

ABSTRACT: THIS PUBLICATION IS DESIGNED TO ASSIST ANYONE WITH LEADERSHIP RESPONSIBILITIES. SECTIONS IN THE BOOK INCLUDE: (1) LEADERSHIP BASICS, (2) A LEADER OR MANAGER, (3) VOLUNTEERS ARE WONDERFUL, AND (4) THE FAMILY. SECTIONS ONE AND TWO ARE ESPECIALLY USEFUL FOR PEOPLE WITH SUPERVISORY AND/OR MANAGEMENT RESPONSIBILITIES. CHAPTERS 5 AND 6 ARE SPECIFICALLY CONCERNED WITH SUPERVISION AND MANAGEMENT.

AVAILABILITY: LEADERSHIP PRESS, P.O. BOX 1144, CLAREMONT, CA 91711

IRIS ACCESSION NUMBER: EW009138

PUBLICATION DATE: 81

TITLE: ACIDITY, METHYL ORANGE - 1810.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ACIDITY; *LABORATORY PROCEDURES; *PH; *WATER; *WASTEWATER
DESCRIPTIVE NOTE: 6P.

ABSTRACT: DESCRIBED IS THE METHYL ORANGE TITRATION METHOD FOR ACIDITY IN WATER AND WASTEWATER. THE DISCUSSION INCLUDES SAMPLING, STORAGE, AND HANDLING OF SOME OF THE CHEMICALS.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW009139

PUBLICATION DATE: 82

TITLE: ARSENIC - 8013.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ARSENIC; *LABORATORY PROCEDURES; OCEANOGRAPHY; *SAMPLING; *SEA WATER; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: 2P.

ABSTRACT: DESCRIBED IS A METHOD FOR DETECTION OF ARSENIC IN WATER, WASTEWATER, AND SEA WATER. SAMPLING, STORAGE, AND HANDLING OF SOME CHEMICALS ARE DISCUSSED.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW009140
PUBLICATION DATE: 81

TITLE: CALCIUM - 8018.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CALCIUM; *LABORATORY PROCEDURES; OCEANOGRAPHY; *SAMPLING; *SEA WATER; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: 4P.

ABSTRACT: DESCRIBED IS A TITRATION METHOD FOR THE DETECTION OF CALCIUM IN WATER, WASTEWATER, AND SEA WATER. SAMPLING, STORAGE, AND HANDLING OF SOME OF THE CHEMICALS ARE DISCUSSED.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW009141

PUBLICATION DATE: 81

TITLE: CARBON DIOXIDE - 8019.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CARBON DIOXIDE; *LABORATORY PROCEDURES; OCEANOGRAPHY; *SAMPLING; *SEA WATER; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: 3P.

ABSTRACT: DESCRIBED IS A TITRATION METHOD FOR THE DETECTION OF CARBON DIOXIDE IN WATER, WASTEWATER, AND SEA WATER. SAMPLING AND HANDLING OF THE SAMPLE ARE DISCUSSED.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW009142

PUBLICATION DATE: 82

TITLE: CHLORIDE - 8020.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHLORIDE; *LABORATORY PROCEDURES; OCEANOGRAPHY; *SAMPLING; *SEA WATER; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: 6P.

ABSTRACT: DESCRIBED IS THE MERCURIC NITRATE METHOD FOR DETECTION OF CHLORIDE IN WATER, WASTEWATER, AND SEA WATER. SAMPLING, STORAGE, AND SPECIAL PRECAUTIONS FOR HANDLING SOME OF THE CHEMICALS ARE NOTED.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW009143
PUBLICATION DATE: 81

TITLE: CHROMIUM, HEXAVALENT - 8023.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHROMIUM; *LABORATORY PROCEDURES; *SAMPLING; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: 3P.

ABSTRACT: DESCRIBED IS AN ANALYTICAL TECHNIQUE FOR DETERMINING HEXAVALENT CHROMIUM IN WATER AND WASTEWATER. INCLUDED IS INFORMATION ON SAMPLING, STORAGE, AND HANDLING OF SOME CHEMICALS.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW009144

PUBLICATION DATE: 81

TITLE: FLUORIDE - 8029.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *FLUORIDE; *GROUNDWATER; *LABORATORY PROCEDURES; *SAMPLING; *SPADNS METHOD; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: 4P.

ABSTRACT: DESCRIBED IS THE SPADNS METHOD FOR DETECTION OF FLUORIDE IN WATER. THIS IS A COLORIMETRIC PROCEDURE. POSSIBLE INTERFERENCES, SAMPLING, AND STORAGE ARE DISCUSSED.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW009145

PUBLICATION DATE: 82

TITLE: NITROGEN, AMMONIA - 8038.

DESCRIPTOR: *AMMONIA NITROGEN; *ANALYTICAL TECHNIQUES; *LABORATORY PROCEDURES; *NESSLER METHOD; *NITROGEN; OCEANOGRAPHY; *SAMPLING; *SEA WATER; *WATER; *WASTEWATER

DESCRIPTIVE NOTE: 6P.

ABSTRACT: DESCRIBED IS THE NESSLER METHOD FOR DETECTION OF AMMONIA NITROGEN IN WATER, WASTEWATER, AND SEA WATER. SAMPLING, STORAGE, HANDLING OF SOME CHEMICALS, AND PRETREATMENT ARE DISCUSSED.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW009146
PUBLICATION DATE: 81

TITLE: NITROGEN, NITRITE - 8040.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *LABORATORY PROCEDURES; *NITRITE NITROGEN; *NITROGEN; *SAMPLING; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: 2P.

ABSTRACT: DESCRIBED IS THE DIAZOTIZATION METHOD FOR THE DETECTION OF NITRITE NITROGEN IN WATER AND WASTEWATER.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW009147

PUBLICATION DATE: 80

TITLE: OIL AND GREASE - 8005.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *GREASE; *LABORATORY PROCEDURES; OIL; SAMPLING; WASTEWATER; WATER

DESCRIPTIVE NOTE: 4P.

ABSTRACT: DESCRIBED IS AN ANALYTICAL METHOD FOR DETECTION OF OIL AND GREASE IN WASTEWATER AND WATER. SAMPLING, STORAGE, AND HANDLING OF SOME OF THE CHEMICALS.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW009148

PUBLICATION DATE: 82

TITLE: OXYGEN, DISSOLVED - 8042.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DISSOLVED OXYGEN; *LABORATORY PROCEDURES; OCEANOGRAPHY; *OXYGEN; *SAMPLING; *SEA WATER; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: 6P.

ABSTRACT: DESCRIBED IS THE OZIDE MODIFICATION OF THE WINKLER METHOD FOR DETECTION OF DISSOLVED OXYGEN IN WATER, WASTEWATER, AND SEA WATER. SAMPLING, STORAGE, AND HANDLING OF SOME CHEMICALS ARE DISCUSSED.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW009149
PUBLICATION DATE: 81

TITLE: RESIDUE, NONFILTRABLE, VOLATILE, TOTAL FILTRABLE.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *LABORATORY PROCEDURES; *OCEANOGRAPHY; *RESIDUES; *SAMPLING; *SEA WATER; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: 4P.

ABSTRACT: DESCRIBED IS A GRAVIMETRIC METHOD FOR DETERMINING NONFILTERABLE, VOLATILE, AND FILTERABLE RESIDUES IN WATER, WASTEWATER, AND SEA WATER. SAMPLING AND STORAGE PROCEDURES ARE DESCRIBED ALSO.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW009150

PUBLICATION DATE: 80

TITLE: SULFATE - 8051.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *LABORATORY PROCEDURES; *SAMPLING; *SULFATES; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: 2P.

ABSTRACT: DESCRIBED IS A TURBIDIMETRIC METHOD FOR THE DETECTION OF SULFATES IN WATER AND WASTEWATER. SAMPLING AND STORAGE PROCEDURES ARE ALSO DISCUSSED.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW009151

PUBLICATION DATE: 80

TITLE: SULFITE - TITRATION METHOD FOR WATER AND WASTEWATER - 8071.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *LABORATORY PROCEDURES; *SAMPLING; *SULFITE; *WASTEWATER; WATER

DESCRIPTIVE NOTE: 4P.

ABSTRACT: DESCRIBED IS A TITRATION METHOD FOR DETECTION OF SULFITE IN WATER AND WASTEWATER. INCLUDED IS INFORMATION ON SAMPLING AND STORAGE OF SAMPLES.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80537

IRIS ACCESSION NUMBER: EW009155
PUBLICATION DATE: 82

TITLE: ANNUAL REPORT 1981.

DESCRIPTOR: *ANNUAL REPORTS; *IRRIGATION; *LAND USE; *LAND RECLAMATION; *SOILS; *WATER RESOURCES; *WATER SUPPLY; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 100P.

ABSTRACT: THIS IS THE 1981 ANNUAL REPORT OF THE INTERNATIONAL INSTITUTE FOR LAND RECLAMATION AND IMPROVEMENT. SECTIONS INCLUDED IN THE REPORT INCLUDE ARTICLES, CONSULTANCY AND TRAINING, PUBLICATIONS, AND ORGANIZATION. ARTICLES ARE INCLUDED ON IRRIGATION, SOILS, WATER MANAGEMENT IN EGYPT AND CROP YIELDS IN PAKISTAN.

AVAILABILITY: INTERNATIONAL INSTITUTE FOR LAND RECLAMATION AND IMPROVEMENT/ILRI, P.O. BOX 45, 6700 AA WAGENINGEN, THE NETHERLANDS

IRIS ACCESSION NUMBER: EW009226

PUBLICATION DATE: JUN 83

TITLE: PRODUCING TRAINING: THE COMPETENCIES THAT TURN IDEAS INTO INSTRUCTION.

PERSONAL AUTHOR: WALLINGTON, CLINT

DESCRIPTOR: *COMPETENCIES; *MEDIA SPECIALISTS; *TRAINING; *WRITERS

DESCRIPTIVE NOTE: 48-50P.

ABSTRACT: THE OVERLAPPING COMPETENCIES OF THE MEDIA SPECIALIST AND THE INSTRUCTIONAL WRITER ILLUSTRATE THE PROBLEM OF DEFINING ROLES IN TRAINING AND DEVELOPMENT. COMMENTS RELATED TO THESE FIELDS AND THE ASTD TRAINING AND DEVELOPMENT COMPETENCY STUDY ARE INCLUDED.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL; V37 N6

IRIS ACCESSION NUMBER: EW009227

PUBLICATION DATE: JUN 83

TITLE: A CONSUMER'S DILEMMA: EVALUATING VENDOR TRAINING.

PERSONAL AUTHOR: MCDEVITT, TERRY

DESCRIPTOR: *CONTRACTED TRAINING; *EVALUATION; *PERFORMANCE EVALUATION; *TRAINING; *VENDORS

DESCRIPTIVE NOTE: 82-85P.

ABSTRACT: VENDOR TRAINING PROGRAMS NEED TO BE EVALUATED BEFORE THEY ARE PURCHASED. SUGGESTIONS FOR EVALUATING VENDORS AND TRAINING PROGRAMS ARE PRESENTED.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL; V37 N6

IRIS ACCESSION NUMBER: EW009228

PUBLICATION DATE: JUN 83

TITLE: HOW TO MAKE A MANAGEMENT ADVISORY COMMITTEE WORK FOR YOU.

PERSONAL AUTHOR: KRUGER, MICHAEL J.

DESCRIPTOR: *ADVISORY COMMITTEES; *MANAGEMENT; *ORGANIZATION; *PLANNING; *PERFORMANCE EVALUATION

DESCRIPTIVE NOTE: 86-90P.

ABSTRACT: PRESENTED ARE SUGGESTIONS FOR USING ADVISORY COMMITTEES EFFECTIVELY. INCLUDED ARE SUGGESTIONS FOR ORGANIZATION, OPERATIONAL PROCEDURES, PITFALLS TO AVOID, AND EVALUATION OF COMMITTEE EFFECTIVENESS.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL; V37 N6

IRIS ACCESSION NUMBER: EW009247

TITLE: READING BLUEPRINTS WORKBOOK - LESSONS 1-10.

DESCRIPTOR: *BLUEPRINTS; DRAFTING; *DRAWINGS; ENGINEERING; *INSTRUCTIONAL MATERIALS; *POSTSECONDARY EDUCATION

DESCRIPTIVE NOTE: 188P.

ABSTRACT: A COMPREHENSIVE WORKBOOK ON BASIC BLUEPRINT READING WHICH MEETS ANSI STANDARDS. THE LESSONS INCLUDE: INTRODUCTION TO PRINT READING, MULTIVIEW DRAWINGS, ISOMETRIC DRAWINGS, TYPES OF LINES USED ON PRINTS, AUXILIARY VIEWS, SECTION VIEWS, ZERO PLANE DIMENSIONING, EXTERNAL FEATURE DIMENSIONS AND TOLERANCES, INTERNAL FEATURE DIMENSIONS AND TOLERANCES. DIE CUT OBJECTS IN THE BACK OF THE BOOK ARE PUNCHED OUT AND ASSEMBLED TO HELP LEARNERS VISUALIZE LESSONS.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303-28TH STREET, S.E., GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW009248

TITLE: READING BLUEPRINTS - LESSONS 1, 2, 3.

DESCRIPTOR: *AUDIOVISUAL AIDS; *BLUEPRINTS; *DRAFTING; *ENGINEERING; *INSTRUCTIONAL MATERIALS; *POSTSECONDARY EDUCATION

DESCRIPTIVE NOTE: 63 SLIDES AND CASSETTE TAPE.

ABSTRACT: THIS PROGRAM INTRODUCES BLUEPRINT READING, EXPLAINS MULTIVIEW DRAWINGS AND ISOMETRIC DRAWINGS. IT IS DESIGNED TO REINFORCE AND EXPAND ON THE LESSONS IN THE READING BLUEPRINTS WORKBOOK (EW 009 247).

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303-28TH STREET, S.E., GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW009249

TITLE: READING BLUEPRINTS - LESSONS 4, 5, & 6.

DESCRIPTOR: *AUDIOVISUAL AIDS; *BLUEPRINTS; *DRAFTING; *ENGINEERING; *INDTRUCTIONAL MATERIALS; *POSTSECONDARY EDUCATION

DESCRIPTIVE NOTE: 40 SLIDES AND CASSETTE TAPE.

ABSTRACT: DESIGNED TO REINFORCE AND EXPAND ON THE LESSONS IN THE READING BLUEPRINTS WORKBOOK (EW 009 247). THIS SLIDE-TAPE DESCRIBES THE TYPES OF LINES USED ON PRINTS, REPRESENTING SURFACES ON PRINTS AND AUXILLIARY VIEWS.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303-28TH STREET, S.E., GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW009250

TITLE: READING BLUEPRINTS - LESSONS 7, 8, 9, & 10.

DESCRIPTOR: *AUDIOVISUAL AIDS; *BLUEPRINTS; *DRAFTING; *ENGINEERING; *INSTRUCTIONAL MATERIALS; *POSTSECONDARY EDUCATION

DESCRIPTIVE NOTE: 76 SLIDES AND CASSETTE TAPE.

ABSTRACT: ILLUSTRATES AND DESCRIBES SECTION VIEWS, ZERO PLANE DIMENSIONING, EXTERNAL AND INTERNAL FEATURE DIMENSIONS AND TOLERANCES. THE PROGRAM EXPANDS AND REINFORCES THE LESSONS IN THE READING BLUEPRINTS WORKBOOK (EW 009 247).

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303-28TH STREET, S.E., GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW009251

PUBLICATION DATE: 78

TITLE: INTRODUCTION TO BLUEPRINTS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *BLUEPRINTS; *DRAFTING; *FILMS; *ENGINEERING; *INSTRUCTIONAL MATERIALS; *POSTSECONDARY EDUCATION

DESCRIPTIVE NOTE: RENTAL PRICE: $15.00. 16-MM COLOR FILM. 12 MIN.

ABSTRACT: THIS FILM INTRODUCES MULTIVIEW DRAWINGS WITH ANIMATED OBJECTS WHICH NOT ONLY GET THE CONCEPTS ACROSS, BUT ALSO HELP THE VIEWER DEVELOP VISUALIZATION SKILLS IMPORTANT IN BLUEPRINT READING AND DRAFTING.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6660 28TH ST. S.E., GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW009252

PUBLICATION DATE: 78

TITLE: FUNDAMENTALS OF PNEUMATICS PART 1: THEORY.

DESCRIPTOR: *AUDIOVISUAL AIDS; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *INDUSTRIAL EQUIPMENT; *POSTSECONDARY EDUCATION; *POWER SYSTEMS; *PNEUMATIC POWER SYSTEMS

DESCRIPTIVE NOTE: 78 SLIDES AND CASSETTE TAPE.

ABSTRACT: THIS SLIDE/TAPE PRESENTS THEORY OF INDUSTRIAL PNEUMATIC POWER SYSTEMS.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 - 28TH STREET, S.E., GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW009253

PUBLICATION DATE: 78

TITLE: FUNDAMENTALS OF PNEUMATICS PART 2A: COMPONENTS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *COMPRESSORS; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *INDUSTRIAL EQUIPMENT; *POSTSECONDARY EDUCATION; *POWER SYSTEMS; *PNEUMATIC POWER SYSTEMS

DESCRIPTIVE NOTE: 74 SLIDES AND CASSETTE TAPE.

ABSTRACT: THIS SLIDE/TAPE PRESENTATION DESCRIBES THE USE OF VACUUMS AND COMPRESSORS AS THEY RELATE TO INDUSTRIAL PNEUMATIC POWER SYSTEMS.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303-28TH STREET, S.E., GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW009254

PUBLICATION DATE: 78

TITLE: FUNDAMENTALS OF PNEUMATICS PART 2B: COMPONENTS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *DRYERS; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *INDUSTRIAL EQUIPMENT; *PNEUMATIC POWER SYSTEMS; *POWER SYSTEMS; *POSTSECONDARY EDUCATION; *VALVES

DESCRIPTIVE NOTE: 54 SLIDES AND CASSETTE TAPE.

ABSTRACT: THIS SLIDE/TAPE PRESENTATION EXPLAINS CHEMICAL

AND REFRIGERATION DRYERS, AND THE PURPOSES AND TYPES OF VALVES USED IN INDUSTRIAL PNEUMATIC POWER SYSTEMS.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303-28TH STREET, S.E., GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW009255

TITLE: FUNDAMENTALS OF PNEUMATICS PART 3: TROUBLESHOOTING.

DESCRIPTOR: *AUDIOVISUAL AIDS; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *PNEUMATICS; *PNEUMATIC POWER SYSTEMS; *POSTSECONDARY EDUCATION; *TROUBLESHOOTING

DESCRIPTIVE NOTE: 74 SLIDES AND CASSETTE TAPE.

ABSTRACT: THE BASICS OF TROUBLESHOOTING INDUSTIRAL PNEUMATIC POWER SYSTEMS ARE DISCUSSED IN THIS SLIDE-TAPE PROGRAM.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303-28TH STREET, S.E., GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW009256

PUBLICATION DATE: 78

TITLE: FUNDAMENTALS OF PNEUMATICS PART 4: SYMBOLS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *PNEUMATICS; *PNEUMATIC POWER SYSTEMS; *POSTSECONDARY EDUCATION; *SYMBOLS

DESCRIPTIVE NOTE: 64 SLIDES AND CASSETTE TAPE.

ABSTRACT: SYMBOLS USED IN INDUSTRIAL PNEUMATIC POWER SYSTEMS ARE ILLUSTRATED.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303-28TH STREET, S.E., GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW009257

PUBLICATION DATE: 76

TITLE: THE THEORY OF HYDRAULICS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *HYDRAULICS; *HYDROSTATIC SYSTEMS; *INSTRUCTIONAL MATERIALS; *POSTSECONDARY EDUCATION; *THEORY

DESCRIPTIVE NOTE: 2ND EDITION. 52 SLIDES AND CASSETTE TAPE.

ABSTRACT: PRESENTS BASIC CONCEPTS OF HYDROSTATIC SYSTEMS SUCH AS FLOW, PRESSURE, AND MECHANICAL ADVANTAGE WITH UNCOMPLICATED LANGUAGE AND CLEAR ILLUSTRATIONS. (16 PAGE STUDENT MANUAL).

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303-28TH STREET, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW009258

PUBLICATION DATE: 76

TITLE: THE HOW 8 WHY OF HYDRAULIC COMPONENTS - PART 1.

DESCRIPTOR: *AUDIOVISUAL AIDS; *EQUIPMENT; *HYDRAULICS; *INSTRUCTIONAL MATERIALS; *FILTERS; *POSTSECONDARY EDUCATION; *PUMPS; *TANKS

DESCRIPTIVE NOTE: 2ND EDITION. 73 SLIDES AND 30 MIN. CASSETTE TAPE.

ABSTRACT: THIS TWO PART PROGRAM CONCENTRATES ON THE BASIC PRINCIPLES OF TANKS, FILTERS, PUMPS AND ACCUMULATORS USING CUTAWAY ILLUSTRATIONS. (40 PAGE STUDENT MANUAL).

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303-28TH STREET, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW009259

TITLE: THE HOW 8 WHY OF HYDRAULIC COMPONENTS - PART 2.

DESCRIPTOR: *AUDIOVISUAL AIDS; *CYLINDERS; *EQUIPMENT; *HYDRAULICS; *INSTRUCTIONAL MATERIALS; *MOTORS; *POSTSECONDARY EDUCATION; *VALVES

DESCRIPTIVE NOTE: 80 SLIDES AND 30 MIN. CASSETTE TAPE.

ABSTRACT: THIS TWO PART PROGRAM CONCENTRATES ON THE BASIC PRINCIPLES OF VALVES, CYLINDERS, AND MOTORS USING CUTAWAY ILLUSTRATIONS.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303-28TH STREET, S.E., GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW009260

PUBLICATION DATE: 76

TITLE: TROUBLESHOOTING HYDRAULIC SYSTEMS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *EQUIPMENT; *HYDRAULICS; *INSTRUCTIONAL MATERIALS; *POSTSECONDARY EDUCATION; *TROUBLESHOOTING

DESCRIPTIVE NOTE: 2ND EDITION. 77 SLIDES AND 19 MINUTE CASSETTE TAPE.

ABSTRACT: THIS PROGRAM CONCENTRATES ON THE SKILLS WHICH MUST BE MASTERED IN ORDER TO TROUBLESHOOT ANY HYDRAULIC SYSTEM, REGARDLESS OF MANUFACTURER. STRESSES THE DEFINITION OF COMPONENT RELATIONSHIPS, ANALYZING PRESSURE AND FLOW. AND ESTABLISHING A LOGICAL TROUBLESHOOTING SEQUENCE. (20 PAGE

STUDENT MANUAL).
AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303-28TH STREET, S.E., GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW009261

PUBLICATION DATE: 76

TITLE: THE LANGUAGE OF FLUID POWER SYSTEMS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *EQUIPMENT; *FLUID POWER SYSTEMS; *GRAPHIC SYMBOLS; *INSTRUCTIONAL MATERIALS; *POSTSECONDARY EDUCATION; *POWER SYSTEMS; *SYMBOLS; *TROUBLESHOOTING

DESCRIPTIVE NOTE: 2ND EDITION. 46 SLIDES AND 8 MINUTE CASSETTE TAPE.

ABSTRACT: THIS PROGRAM INTRODUCES THE BASIC GRAPHIC SYMBOLS USED IN THE FLUID POWER INDUSTRY. STRESSES THE IMPORTANCE OF USING SCHEMATICS IN TROUBLESHOOTING. (12 PAGE STUDENT MANUAL).

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303-28TH STREET, S.E., GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW009295

PUBLICATION DATE: 83

TITLE: ANCIENT WATER WORKS--LESSONS FROM HISTORY.

PERSONAL AUTHOR: GARBRECHT, GUNTHER

DESCRIPTOR: *CONSERVATION; *FLOOD CONTROL; *HISTORY; *MANAGEMENT; *NATURAL RESOURCES; *SURFACE RUNOFF; *WATER RESOURCES; *WATER SUPPLY; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 5-16P.

ABSTRACT: TECHNICAL INSTALLATIONS FOR PROTECTION AGAINST EXCESS WATER AND FOR CONSERVATION OF SCARCE WATER ARE AMONG MANKIND'S EARLIEST TECHNOLOGICAL ACHIEVEMENTS. BASIN IRRIGATION IN EGYPT, CANALS AND WATER-LIFTING DEVICES IN MESOPOTAMIA, UNDERGROUND CONDUITS OF ASSYRIA AND PERSIA, THE AQUEDUCTS OF ROME, AND RUNOFF AGRICULTURE IN THE MIDDLE EAST ALL STAND AS EXPERIENCES OF HISTORY THAT CAN TEACH US ABOUT MODERN WATER RESOURCES MANAGEMENT.

AVAILABILITY: IMPACT OF SCIENCE ON SOCIETY; N1

IRIS ACCESSION NUMBER: EW009296

PUBLICATION DATE: 83

TITLE: THE INFLUENCE OF SCIENCE ON WATER INSTITUTIONS.

PERSONAL AUTHOR: CANO, GUILLERMO J.
DESCRIPTOR: *ADMINISTRATION; *LAWS; *POLICY; *SCIENCES; *TECHNOLOGY; *WATER RESOURCES; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 17-24P.

ABSTRACT: WATER INSTITUTIONS EXIST TO ASSIST PUBLIC POLICY-MAKING ON WATER USE, TO ESTABLISH LEGAL RIGHTS AND OBLIGATIONS CONCERNING WATER, AND TO ADMINISTER WATER SERVICES. EACH OF THESE BROAD AREAS OF CONCERN ARE UNDERGOING CHANGES AT THE HAND OF SCIENCE AND TECHNOLOGY, SHIFTING TO A CONSERVATIONIST EMPHASIS AND A CONCERN FOR WATER QUALITY.

AVAILABILITY: IMPACT OF SCIENCE ON SOCIETY; N1

IRIS ACCESSION NUMBER: EW009297

PUBLICATION DATE: 83

TITLE: THE ABUSE AND USE OF THE HYDROLOGICAL CYCLE.

PERSONAL AUTHOR: ISSAR, ARIE

DESCRIPTOR: *ATTITUDES; *EDUCATIONAL NEEDS; *HYDROLOGIC CYCLE; *KNOWLEDGE; *SCIENTISTS; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 27-33P.

ABSTRACT: MISCONCEPTIONS ABOUT NATURAL SYSTEMS STILL INFLUENCE BASIC ATTITUDES TOWARD THE HYDROLOGICAL CYCLE TO THE HARM OF COUNTRIES IN ARID ZONES. A MORE APPROPRIATE EDUCATION OF SPECIALISTS IS NEEDED.

AVAILABILITY: IMPACT OF SCIENCE ON SOCIETY; N1

IRIS ACCESSION NUMBER: EW009298

PUBLICATION DATE: 83

TITLE: ARE GROUNDWATER RESOURCES SUFFICIENTLY PROTECTED?

PERSONAL AUTHOR: KROVACS, GYORGY

DESCRIPTOR: *AGRICULTURE; *GROUNDWATER; *IRRIGATION; *NATURAL RESOURCES; *POLLUTION; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 35-48P.

ABSTRACT: RATIONAL USE OF THE EARTH'S WATER RESOURCES REQUIRES THE COMPLETE QUANTITATIVE AND QUALITATIVE MANAGEMENT OF GROUNDWATER BASINS. HYDROLOGICAL PROCESSES IN THESE AQUIFERS CAN LEAD TO SALT ACCUMULATION IN SOILS AND EVEN IN THE GROUNDWATER ITSELF. MAN CAN ALSO POLLUTE THESE AQUIFERS BY IMPROPER HANDLING OF WASTES IN DUMPS AND INCREASINGLY FROM USE OF CHEMICALS AND IRRIGATION IN AGRICULTURE.

AVAILABILITY: IMPACT OF SCIENCE ON SOCIETY; N1

IRIS ACCESSION NUMBER: EW009299

PUBLICATION DATE: 83

TITLE: IRRIGATION--THE MOST CONSUMING WATER USE.

PERSONAL AUTHOR: FRAMJI, K. K.

DESCRIPTOR: *AGRICULTURE; *FOOD; *IRRIGATION; *MANAGEMENT; *POPULATION GROWTH; *WATER RESOURCES; *WATER SUPPLY; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 49-56P.

ABSTRACT: PRODUCTION OF FOOD AND FIBRE CONSUMES MORE WATER THAN ANY OTHER HUMAN USE. IRRIGATION IS THE HEAVIEST USER OF WATER. IRRIGATION CAN HELP TO MEET POPULATION NEEDS FOR FOOD, BUT THE KEY LIES IN EFFICIENT WATER MANAGEMENT.

AVAILABILITY: IMPACT OF SCIENCE ON SOCIETY; N1

IRIS ACCESSION NUMBER: EW009300

PUBLICATION DATE: 83

TITLE: MULTI-PURPOSE RESERVOIR SYSTEM MANAGEMENT.

PERSONAL AUTHOR: MOHANTY, R. P.

DESCRIPTOR: *INDIA; *MANAGEMENT; *NATURAL RESOURCES; *RESERVOIRS; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 83-95P.

ABSTRACT: THE EQUITABLE DISTRIBUTION OF THE BENEFITS OF A WATER RESERVOIR PROJECT CAN BEST BE ASSURED THROUGH A RATIONAL MANAGEMENT PROCESS. THE CHARACTERISTICS OF A MULTI-PURPOSE RESERVOIR SYSTEM IN INDIA ARE DESCRIBED AS WELL AS A DYNAMIC MANAGEMENT POLICY THAT IS RESPONSIVE TO USERS' DEMANDS AND THE SYSTEMS' PERFORMANCE.

AVAILABILITY: IMPACT OF SCIENCE ON SOCIETY; N1

IRIS ACCESSION NUMBER: EW009301

PUBLICATION DATE: 83

TITLE: ARTIFICIAL RESERVOIRS.

PERSONAL AUTHOR: OBENG, LETITIA

DESCRIPTOR: BIOLOGY; *DAMS; *ECOLOGY; LAKES; NATURAL RESOURCES; *RESERVOIRS; RIVERS; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 97-103P.

ABSTRACT: BUILDING DAMS TO STOP THE FLOW OF WATER IN STREAMS AND RIVERS, THUS CREATING RESERVOIRS, IS A PRACTICE THAT DATES BACK 5,000 YEARS IN HISTORY. SINCE IMPRONDING WATER UPSETS THE PREVIOUS ECOLOGY, AN UNDERSTANDING OF BOTH RIVERS AND LAKES IS NEEDED FOR SOUND MANAGEMENT OF RESERVOIRS. RESERVOIRS CONFER BENEFITS BUT MAY ALSO BRING ADVERSE EFFECTS.

AVAILABILITY: IMPACT OF SCIENCE ON SOCIETY; N1

IRIS ACCESSION NUMBER: EW009302

PUBLICATION DATE: 83

TITLE: GEMS/WATER--GLOBAL WATER-QUALITY MONITORING.

PERSONAL AUTHOR: BARABAS, SILVIO

DESCRIPTOR: CANADA; *GEMS/WATER; *INTERNATIONAL COOPERATION; *MONITORING; TRAINING; UNITED NATIONS; WATER RESOURCES; *WATER QUALITY

DESCRIPTIVE NOTE: 105-115P.

ABSTRACT: GEMS/WATER IS A COOPERATIVE INTERNATIONAL EFFORT UNDER A UNITED NATIONS UMBRELLA THAT MONITORS WATER QUALITY IN RIVERS, LAKES, AND AQUIFERS WORLDWIDE. AT PRESENT, OVER 300 MONITORING STATIONS IN 50 COUNTRIES REPORT TO THE GLOBAL CENTER IN CANADA. DATA INCLUDE 13 BASIC PARAMETERS OF WATER QUALITY.

AVAILABILITY: IMPACT OF SCIENCE ON SOCIETY; N1

IRIS ACCESSION NUMBER: EW009316

PUBLICATION DATE: MAY 83

TITLE: COMMUNITY TREATMENT OF COMPATIBLE INDUSTRIAL WASTEWATERS.

PERSONAL AUTHOR: KIRK, DONALD G.

DESCRIPTOR: *CONSTRUCTION; *COSTS; *COST SHARING; *FINANCING; *CAPITAL COSTS; *INDUSTRIAL WASTES; *MUNICIPAL WASTES; *MAINTENANCE COSTS; *OPERATING COSTS; *PLANNING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 8-11P.

ABSTRACT: JOINT COMMUNITY TREATMENT OF COMPATIBLE WASTEWATERS HAS BEEN SHOWN TO HAVE ECONOMIC BENEFITS FOR BOTH THE INDUSTRIAL AND RESIDENTIAL CITIZENS OF A COMMUNITY. A TRACY, CALIFORNIA PLANT THAT SERVES A DUAL ROLE IS USED AS AN EXAMPLE FOR DETERMINING CAPITAL, OPERATING, AND MAINTENANCE COSTS FOR BOTH THE COMMUNITY AND INDUSTRIES.

AVAILABILITY: INDUSTRIAL WASTES; V29 N3

IRIS ACCESSION NUMBER: EW009317
PUBLICATION DATE: MAY 83

TITLE: RECYCLING IN THE PERFORMANCE OF A HIGH-RATE TRICKLING FILTER.

PERSONAL AUTHOR: GARRISON, JIM; AND OTHERS

DESCRIPTOR: *DAIRY INDUSTRY; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *TRICKLING FILTERS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 12-14P.

ABSTRACT: A FULL SCALE INDUSTRIAL WASTES TREATMENT PLANT LOCATED IN CABOOL, MISSOURI, SERVED AN IMPORTANT ROLE IN A STUDY TO DETERMINE THAT HIGHER WETTING RATES OF THE FILTER IMPROVE PLANT PERFORMANCE.

AVAILABILITY: INDUSTRIAL WASTES; V29 N3

IRIS ACCESSION NUMBER: EW009318

PUBLICATION DATE: MAY 83

TITLE: RESOURCEFULNESS IN SOLVING WASTES PROBLEMS.

PERSONAL AUTHOR: DAVID, BRAD G.; REEVES, CLINT W.

DESCRIPTOR: *ELECTROPLATING; *INDUSTRIAL WASTES; *METALS; *LANDFILLS; *OPERATIONS (WASTEWATER); *REGULATIONS; *SLUDGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 15,16,21P.

ABSTRACT: THE ABILITY OF PLANT STAFF TO DEVELOP A GOOD GRASP OF THE TREATMENT OF ELECTROPLATING WASTES AND NEGOTIATE WITH REGULATORY AGENCIES AT ALL LEVELS, AS WELL AS RECOGNIZING THE IMPORTANCE OF LABORATORY CONTROL, WERE SIGNIFICANT FACTORS IN THIS METAL FINISHING PLANT'S SOLUTION TO A DIFFICULT TREATMENT PROBLEM.

AVAILABILITY: INDUSTRIAL WASTES; V29 N3

IRIS ACCESSION NUMBER: EW009421

PUBLICATION DATE: JAN 83

TITLE: COMBUSTION TOXICOLOGY: PRINCIPLES AND TEST METHODS.

PERSONAL AUTHOR: KAPLAN, HAROLD L.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *COMBUSTION TOXICOLOGY; *EQUIPMENT; *LABORATORY PROCEDURES; *LABORATORY TECHNIQUES; *FIRE; *SMOKE; *TEST METHODS; *TOXICOLOGY

DESCRIPTIVE NOTE: 167P. PRICE: $22.00

AVAILABILITY: TECHNOMIC PUBLISHING COMPANY, INC., 851 NEW HOLLAND AVE., BOX 3535, LANCASTER, PA 17604

IRIS ACCESSION NUMBER: EW009434

PUBLICATION DATE: 83

TITLE: HANDBOOK OF FLUIDS IN MOTION.

PERSONAL AUTHOR: CHEREMISINOFF, NICHOLAS P.; GUPTA, RAMESH

DESCRIPTOR: *ENGINEERING; *FLUID FLOW; *FLUID MECHANICS; *GASES; *HANDBOOKS; *LIQUIDS; *PHYSICS

DESCRIPTIVE NOTE: 1200P. PRICE: $79.95.

ABSTRACT: THIS IS A COMPREHENSIVE REFERENCE BOOK FOR THE FIELD OF FLUID MECHANICS. SYSTEMS ARE DESCRIBED IN DETAIL. MAJOR SECTIONS ARE: (1) SINGLE PHASE FLOWS, (2) GAS-LIQUID FLOWS, (3) GAS-SOLID FLOWS, (4) LIQUID-SOLID FLOWS, AND (5) SPECIAL TOPICS IN FLOW PHENOMENA. FIFTY INTERNATIONALLY RECOGNIZED EXPERTS CONTRIBUTED TO THIS PUBLICATION.

AVAILABILITY: BUTTERWORTH PUBLISHERS, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW009456

PUBLICATION DATE: MAR 83

TITLE: ORSANCO/1982.

DESCRIPTOR: *ANNUAL REPORTS; *OHIO RIVER; *ORSANCO; *RIVERS; *WATER QUALITY; *WATER RESOURCES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 24P.

ABSTRACT: THIS IS THE ANNUAL REPORT OF THE OHIO RIVER VALLEY WATER SANITATION COMMISSION (ORSANCO). DESCRIBED ARE THE OHIO RIVER ON-STREAM INFORMATION SYSTEM, INFORMATION ON 20 CHARACTERISTICS AND SUBSTANCES IN RIVER WATER, INFORMATION ON FISH, WASTEWATER TREATMENT FACILITIES RELATED TO THE OHIO RIVER, AND WATER QUALITY INFORMATION.

AVAILABILITY: OHIO RIVER VALLEY WATER SANITATION COMMISSION, 414 WALNUT STREET, CINCINNATI, OH 45202

IRIS ACCESSION NUMBER: EW009465

PUBLICATION DATE: 83

TITLE: NEWSPAPER COMMUNICATIONS ABOUT ACID DEPOSITION IN FIVE NORTH AMERICAN DAILIES, 1979-1982.

PERSONAL AUTHOR: KAUFFELD, JUDY ANN

DESCRIPTOR: *ACID RAIN; *ACID DEPOSITION; *MASS MEDIA; *NEWSPAPERS; *RESEARCH REPORTS

DESCRIPTIVE NOTE: 150P. PRICE: $1.00 PER DOCUMENT PLUS $0.03 PER PAGE.

ABSTRACT: THIS THESIS REPORTS CONTENT ANALYSIS OF NEWSPAPER COVERAGE OF ACID DEPOSITION IN FIVE GEOGRAPHIC REGIONS OF NORTH AMERICA FROM 1979 THROUGH 1982. RESULTS INDICATED A GENERAL UPWARD TREND IN THE AMOUNT OF COVERAGE ACCORDED ACID DEPOSITION OVER THE PERIOD. THE MOST FREQUENTLY CITED SOLUTIONS WERE THOSE CLASSIFIED AS TIGHTER EMISSION REGULATIONS FOR INDUSTRY.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW009466

PUBLICATION DATE: 83

TITLE: ARE HAZARDOUS WASTE DUMPS A PROBLEM OF THE NORTHEASTERN STATES?

PERSONAL AUTHOR: HURLEY, MIKE

DESCRIPTOR: *DISTRIBUTION; *HAZARDOUS WASTES; *HAZARDOUS WASTE SITES; *LAND USE; *POLLUTION; *PREDICTION; *RESEARCH REPORTS; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 52P.

ABSTRACT: INVESTIGATED IN THIS REPORT IS THE DISTRIBUTION OF HAZARDOUS WASTE SITES IN THE U.S. FIVE PRIMARY HYPOTHESES AND THREE SECONDARY HYPOTHESES WERE TESTED. THE DATA INDICATED THAT HAZARDOUS WASTE IS NOT JUST A PROBLEM OF OLDER, MORE POPULATED, INDUSTRIALIZED, NORTHEASTERN STATES; IT IS A WIDESPREAD PROBLEM IN THE U.S.

AVAILABILITY: CITIZENS FOR CITIZENS, INC., 264 GRIFFIN STREET, FALL RIVER, MA 02724

IRIS ACCESSION NUMBER: EW009467

PUBLICATION DATE: JUL 83

TITLE: GROUND-WATER MANAGEMENT IN ARIZONA.

PERSONAL AUTHOR: BRIGGS, PHILIP C.

DESCRIPTOR: *ARIZONA; *CONSERVATION; *GROUNDWATER; *MANAGEMENT; *WATER CONSERVATION; *WATER CODES; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 195-202P.

ABSTRACT: DISCUSSED IS THE GROUNDWATER SITUATION IN ARIZONA, GROUNDWATER MANAGEMENT, AND THE GROUNDWATER CODE. THE CODE IS DESIGNED TO RESTRICT AND CONTROL WITHDRAWALS AND USES OF GROUNDWATER AND ALSO TO REDUCE RATES OF OVERDRAFT.

AVAILABILITY: JOURNAL OF WATER RESOURCES PLANNING AND MANAGEMENT; V109 N3

IRIS ACCESSION NUMBER: EW009468

PUBLICATION DATE: JUL 83

TITLE: WATER REUSE IN WATER SURPLUS ENVIRONMENT.

PERSONAL AUTHOR: SMITH, JOHN W.; RITTER, CLIFTON

DESCRIPTOR: *CONSERVATION; *MANAGEMENT; *PLANNING; *RECYCLING; *SURVEYS; *WATER CONSERVATION; *WATER REUSE; *WATER SUPPLY; *TENNESSEE

DESCRIPTIVE NOTE: 223-235P.

ABSTRACT: REPORTED IS A STUDY DESIGNED TO DETERMINE THE POTENTIAL FOR WATER REUSE IN THE MEMPHIS, TENNESSEE AREA. THE AREA HAS A SUBSTANTIAL WATER SUPPLY, BUT FELT PLANNING WAS NEEDED. INDUSTRIAL USE OF RECYCLED WATER APPEARED TO BE THE MOST ATTRACTIVE FOR THIS AREA.

AVAILABILITY: JOURNAL OF WATER RESOURCES PLANNING AND MANAGEMENT; V109 N3

IRIS ACCESSION NUMBER: EW009469

PUBLICATION DATE: JUL 83

TITLE: DATA AUTOMATION FOR WATER SUPPLY MANAGEMENT.

PERSONAL AUTHOR: SUTTER, ROBERT J.; AND OTHERS

DESCRIPTOR: *AUTOMATION; *COMPUTER APPLICATIONS; *CONSERVATION; *DATA PROCESSING; *MANAGEMENT; *PLANNING; *RESERVOIRS; *RIVERS; *WATER SUPPLIES; *WATER USE

DESCRIPTIVE NOTE: 237-252P.

ABSTRACT: DESCRIBED IS AN AUTOMATED WATER SUPPLY MANAGEMENT PROGRAM FOR A MULTI-RESERVOIR SYSTEM, THE UPPER SNAKE RIVER IN IDAHO. DATA ARE COLLECTED DAILY AND TRANSMITTED TO A CENTRAL COMPUTER. THE COMPUTER PROGRAMS COMPUTE WATER SUPPLIES, USE, AND PROJECTED USE AND SUPPLIES.

AVAILABILITY: JOURNAL OF WATER RESOURCES PLANNING AND MANAGEMENT; V109 N3

IRIS ACCESSION NUMBER: EW009523

PUBLICATION DATE: 79

TITLE: WETLANDS...A CASE FOR PROTECTION.

DESCRIPTOR: *AUDIOVISUAL AIDS; FLOOD CONTROL; *ENVIRONMENTAL IMPACT; *INSTRUCTIONAL MATERIALS; GROUNDWATER; *HISTORY; *FEDERAL POLICIES; POLLUTION CONTROL; *VALUES; *WETLANDS; WILDLIFE

DESCRIPTIVE NOTE: RENTAL PRICE: $15.00. 12 MINUTE COLOR 3/4" U-MATIC VIDEOCASSETTE.

ABSTRACT: EXPLAINS THE COMPONENTS OF WETLANDS AND THEIR VALUES INCLUDING FLOOD CONTROL, SHORELINE PROTECTION, GROUNDWATER REPLENISHMENT, WATER PURIFICATION, FOOD PRODUCTION, AND ANIMAL HABITAT. THE HISTORY OF WETLAND DEVELOPMENT SHOWS FILLING, STRIPPING VEGETATION, DRAINING, ALTERING STREAMFLOW PATTERNS, DISPOSAL OF REFUSE, AND DESTRUCTION OF HABITAT. SEVERAL CHANGES IN NATIONAL POLICIES TOWARDS SAVING WETLANDS ARE NOTED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

INSTITUTION NAME: U.S. ENVIRONMENTAL PROTECTION AGENCY.

IRIS ACCESSION NUMBER: EW009524

PUBLICATION DATE: AUG 77

TITLE: SEPTIC TANKS AND THE ENVIRONMENT.

DESCRIPTOR: *AUDIOVISUAL AIDS; *CONSTRUCTION; *DESIGN; *INSTRUCTIONAL MATERIALS; *MAINTENANCE; *OPERATIONS (WASTEWATER); *ONSITE DISPOSAL; *SEPTIC TANKS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: RENTAL PRICE: $15.00. PURCHASE PRICE: 3/4" @ $60; VHS @ $53. 18 MINUTE COLOR 3/4" U-MATIC VIDEOCASSETTE.

ABSTRACT: SEPTIC TANK SOIL ABSORPTION SYSTEMS ARE THE MOST WIDELY USED METHODS OF ON-SITE DOMESTIC WASTE DISPOSAL IN THE UNITED STATES. DESIGN, CONSTRUCTION, OPERATION AND MAINTENANCE OF SEPTIC TANK SYSTEMS ARE DESCRIBED IN THIS FILM TRANSFERRED TO VIDEOTAPE. THE POTENTIAL FOR CONTAMINATION OF GROUND WATER AND SHALLOW WELL WATER SYSTEMS IS DEMONSTRATED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

INSTITUTION NAME: U.S. ENVIRONMENTAL PROTECTION AGENCY.

IRIS ACCESSION NUMBER: EW009525

TITLE: INLANDS IN THE SUN: THE CALIFORNIA WETLANDS.

DESCRIPTOR: AGRICULTURE; *AUDIOVISUAL AIDS; *CALIFORNIA; *INSTRUCTIONAL MATERIALS; *ENVIRONMENTAL IMPACT; *GRASSLANDS; *CONSERVATION; BIOLOGY; ECONOMICS; *WETLANDS

DESCRIPTIVE NOTE: RENTAL PRICE: $15.00. PURCHASE PRICE: 3/4" @ $60; VHS @ $53. 15 MINUTE COLOR 3/4" U-MATIC VIDEOCASSETTE.

ABSTRACT: DESCRIBES THE BIOLOGICAL, AGRICULTURAL, AND ECONOMIC IMPORTANCE OF CALIFORNIA'S WETLANDS AND GRASSLANDS. THE CHANGES INCURRED BY POPULATION, AGRICULTURAL, AND INDUSTRIAL GROWTH IN THE AREA ARE DISCUSSED. EXAMINES THE CONSERVATION EASEMENT PROGRAM FOR THE PRESERVATION OF PRIVATE WETLANDS AND OUTLINES FUTURE PLANS FOR THE RESTORATION OF SELECTED AREAS TO NATURAL MARSHLAND, INCORPORATING THEM INTO THE NATIONAL WILDLIFE REFUGE SYSTEM.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

INSTITUTION NAME: U.S. DEPARTMENT OF THE INTERIOR.

IRIS ACCESSION NUMBER: EW009526

PUBLICATION DATE: 79

TITLE: SLUDGE DISPOSAL - A NEW OPTION.

DESCRIPTOR: *AUDIOVISUAL AIDS; *DISINFECTION; ECONOMICS; ENVIRONMENTAL IMPACT; CESIUM; *IRRADIATION; *INSTRUCTIONAL MATERIALS; PATHOGENS; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: RENTAL PRICE: $15.00. PURCHASE PRICE: 3/4" @ $60; VHS @ $53. 18 MINUTE COLOR 3/4" U-MATIC VIDEOCASSETTE.

ABSTRACT: DESCRIBES A NEW OPTION FOR THE PROBLEM OF SLUDGE DISPOSAL WHICH USES GAMMA RAYS FROM CESIUM 137 TO IRRADIATE SLUDGE AND DESTROY PATHOGENS. USED IN CONJUNCTION WITH OTHER TREATMENT PROCESSES, THE IRRADIATION PROCEDURE ALLOWS THE SLUDGE TO BE USED AS FERTILIZER AND ANIMAL FEED SUPPLEMENT. THE RESEARCH AND METHODOLOGY ARE DISCUSSED IN DETAIL ALONG WITH THE ENVIRONMENTAL AND ECONOMIC AFFECTS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

INSTITUTION NAME: U.S. ENVIRONMENTAL PROTECTION AGENCY.

IRIS ACCESSION NUMBER: EW009527

PUBLICATION DATE: 71

TITLE: ENTRAPPED AIR IN PIPELINES.

DESCRIPTOR: *AIR; *AUDIOVISUAL AIDS; *CONSTRUCTION; *DESIGN; *INSTRUCTIONAL MATERIALS; *MAINTENANCE; *PIPES; *WATER PIPES

DESCRIPTIVE NOTE: RENTAL PRICE: $15.00. PURCHASE PRICE: 3/4" @ $60; VHS @ $53. 18 MINUTE COLOR 3/4" U-MATIC VIDEOCASSETTE.

ABSTRACT: EXAMINES THE CAUSES AND EFFECTS OF ENTRAPPED AIR IN PIPELINES. DESCRIBES SOLUTIONS TO THE PROBLEM INCLUDING AUTOMATIC AIR RELEASE VALVES, LAYING PIPES TO GRADE, AND

BLEEDING AIR FROM LINES.
AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

INSTITUTION NAME: COLORADO STATE UNIVERSITY - WATER RESOURCES PROJECT OF THE DEPARTMENT OF CIVIL ENGINEERING HYDRAULICS LABORATORY.

IRIS ACCESSION NUMBER: EW009528

PUBLICATION DATE: 78

TITLE: JAR TEST (ZETA POTENTIALS).

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *AUDIOVISUAL AIDS; *INSTRUCTIONAL MATERIALS; *JAR TEST; *OPERATIONS (WASTEWATER); *WATER TREATMENT; *WASTEWATER TREATMENT; *ZETA POTENTIALS

DESCRIPTIVE NOTE: 78P. RENTAL PRICE: $15.00. PURCHASE PRICE: 3/4" @ $60; VHS @ $53. 29 MINUTE BLACK & WHITE 3/4" U-MATIC VIDEOCASSETTE.

ABSTRACT: DEMONSTRATES THE JAR TEST PROCEDURE AND EXPLAINS THE BRIGGS CELL AND ZETA METER OPERATION. THE ZETA POTENTIAL IS APPLICABLE TO RESEARCH AND IN THE PRACTICAL SELECTION OF POLYMERS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

INSTITUTION NAME: U.S. ENVIRONMENTAL PROTECTION AGENCY, ENVIRONMENTAL RESEARCH CENTER.

IRIS ACCESSION NUMBER: EW009529

PUBLICATION DATE: JUL 83

TITLE: EXPECTING INFORMATION.

PERSONAL AUTHOR: REGAN, KATHLEEN D.

DESCRIPTOR: *COMPARATIVE ANALYSES; *PERSONNEL; *SALARIES; *SURVEYS: *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 918-928P.

ABSTRACT: THIS ARTICLE PRESENTS INFORMATION ON WASTEWATER PERSONNEL FOR 1982. MAJOR FEATURES OF THE ARTICLE ARE TYPES OF TREATMENT PROCESSES REPORTED BY FACILITIES, STARTING AND MAXIMUM SALARIES FOR VARIOUS PERSONNEL BY AREAS IN THE U.S. AND FOR A FEW PLANTS IN CANADA, PAY DIFFERENTIALS FOR SHIFT WORK AND EDUCATION/TRAINING, AND SALARY COMPARISONS WITH PREVIOUS YEARS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N7

IRIS ACCESSION NUMBER: EW009530
PUBLICATION DATE: JUL 83

TITLE: COMPOSITE CORRECTION PROGRAM TO IMPROVE PLANT PERFORMANCE.

PERSONAL AUTHOR: COBOURN, GREGORY H.; POPOWCHAK, TED

DESCRIPTOR: CCP; *COMPOSITE CORRECTION PROGRAMS; *EVALUATION; *FACILITIES; *OPERATIONS (WASTEWATER); *MISSOURI; *PERFORMANCE EVALUATION; *PERSONNEL; *TECHNICAL ASSISTANCE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 929-934P.

ABSTRACT: THE HEART OF THE COMPOSITE CORRECTION PROGRAM (CCP) APPROACH IS ADDRESSING SEVERAL COMBINATIONS OF POSSIBLE PERFORMANCE-LIMITING FACTORS. THIS PAPER DISCUSSES THE CCP CONDUCTED IN EASTERN MISSOURI BY A PRIVATE CONSULTANT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N7

IRIS ACCESSION NUMBER: EW009531

PUBLICATION DATE: JUL 83

TITLE: OPERATIONAL CHARACTERISTICS OF FEDERALLY FUNDED WASTEWATER TREATMENT PLANTS.

PERSONAL AUTHOR: UCHRIN, CHRISTOPHER G.; CASPE, RICHARD L.

DESCRIPTOR: *COMPARATIVE ANALYSES; *COMPLIANCE; *FACILITIES; *OPERATIONS (WASTEWATER); *NEW JERSEY; *NEW YORK; *PERFORMANCE CHARACTERISTICS; *PERFORMANCE EVALUATION; *TRICKLING FILTERS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 935-940P.

ABSTRACT: AN ANALYSIS OF DISCHARGE MONITORING REPORTS IN NEW JERSEY AND NEW YORK SHOWS THAT TRICKLING FILTER PLANTS WERE MORE CONSISTENT PERFORMERS THAN OTHER SECONDARY PLANTS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N7

IRIS ACCESSION NUMBER: EW009532

PUBLICATION DATE: JUL 83

TITLE: INHIBITION OF FLOCCULATION PROCESSES IN SYSTEMS CONTAINING ORGANIC MATTER.

PERSONAL AUTHOR: NARKIS, N.; REBHUN, M.

DESCRIPTOR: *FLOCCULATION; *OPERATIONS (WASTEWATER); *ORGANIC COMPOUNDS; *ORGANIC MATTER; *POLYELECTROLYTES; *RESEARCH; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 947-955P.

ABSTRACT: COMPETITION BETWEEN SUSPENDED SOLIDS AND DISSOLVED ORGANIC MATTER MAKES LARGER DOSES OF POLYELECTROLYTE NECESSARY. THE PRACTICABILITY OF FLOCCULATION AS A TERTIARY TREATMENT IS GOVERNED BY THE EFFLUENT ORGANIC CONTENT AND BY CORRESPONDING FLOCCULANT REQUIREMENTS. IMPURITIES TO BE REMOVED SHOULD BE KNOWN AND SPECIFIED IN ADVANCE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N7

IRIS ACCESSION NUMBER: EW009533

PUBLICATION DATE: JUL 83

TITLE: KINETICS OF CARBON AND AMMONIA NITROGEN REMOVAL IN RBCS.

PERSONAL AUTHOR: PANO, ABRAHAM; MIDDLEBROOKS, E. JOE

DESCRIPTOR: *BIOLOGICAL CONTACTORS; *CARBON; *COD; *KINETICS; *NITROGEN; OPERATIONS (WASTEWATER); *RESEARCH; *ROTATING BIOLOGICAL CONTACTORS; *TEMPERATURE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 956-965P.

ABSTRACT: CARBON AND NITROGEN REMOVAL IN ROTATING BIOLOGICAL CONTACTORS (RBCS) FOLLOW MONOD GROWTH KINETICS AND ARE STRONGLY INFLUENCED BY TEMPERATURE AND ORGANIC LOADING RATE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N7

IRIS ACCESSION NUMBER: EW009534

PUBLICATION DATE: JUL 83

TITLE: CHARACTERISTICS OF ACTIVATED SLUDGE EFFLUENTS BEFORE AND AFTER BREAKPOINT CHLORINATION.

PERSONAL AUTHOR: TRGOVCICH, BORIS; AND OTHERS

DESCRIPTOR: *ACTIVATED SLUDGE; *BREAKPOINT CHLORINATION; *CHLORINATION; *EFFLUENT; *ORGANIC MATTER; *OPERATIONS (WASTEWATER); *OXYGEN; *PH; *RESEARCH; *SLUDGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 966-976P.

ABSTRACT: MANIPULATION OF PH AND DISSOLVED OXYGEN HAD LITTLE EFFECT ON EFFLUENT ORGANICS, BUT DID MITIGATE SOME ADVERSE EFFECTS OF BREAKPOINT CHLORINATION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N7

IRIS ACCESSION NUMBER: EW009535

PUBLICATION DATE: JUL 83

TITLE: IRRADIATION AS A MEANS TO MINIMIZE PUBLIC HEALTH RISKS FROM SLUDGE-BORNE PATHOGENS.

PERSONAL AUTHOR: YEAGER, J. GARY; O'BRIEN, R. T.

DESCRIPTOR: *BACTERIA; *DISINFECTION; *IRRADIATION; *MICROORGANISMS; *PATHOGENS; *PUBLIC HEALTH; *SLUDGE; *RESEARCH; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *VIRUSES

DESCRIPTIVE NOTE: 977-983P.

ABSTRACT: BACTERIAL, PARASITIC, AND FUNGAL PATHOGENS ARE EFFECTIVELY ELIMINATED BY 1 MRAD OF GAMMA RADIATION, BUT VIRUSES ARE SOMEWHAT MORE RESISTANT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N7

IRIS ACCESSION NUMBER: EW009536

PUBLICATION DATE: JUL 33

TITLE: RECOVERY OF METALS FROM ELECTROPLATING WASTES USING LIQUID-LIQUID EXTRACTION.

PERSONAL AUTHOR: CLEVENGER, T. E.; NOVAK, J. T.

DESCRIPTOR: *CHELATING COMPOUNDS; *ECONOMICS; *ELECTROPLATING; *INDUSTRIAL WASTES; *METALS; *RECOVERY SYSTEMS; *RESEARCH; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 984-989P.

ABSTRACT: AN ECONOMIC LIMITATION ON THE LIQUID-LIQUID EXTRACTION PROCESS IS THE FACT THAT THE CHELATING AGENTS ARE EXPENSIVE AND THOSE TESTED CANNOT BE RECOVERED FOR USE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N7

IRIS ACCESSION NUMBER: EW009537

PUBLICATION DATE: JUL 83

TITLE: PREDICTIVE CAPABILITY OF U.S. OECD PHOSPHORUS LOADING-EUTROPHICATION RESPONSE MODELS.

PERSONAL AUTHOR: RAST, WALTER; AND OTHERS

DESCRIPTOR: *EUTROPHICATION; *MODELS; *PHOSPHORUS; *PREDICTION; *RECOMMENDATIONS; *RESEARCH; *WATER QUALITY

DESCRIPTIVE NOTE: 990-1003P.

ABSTRACT: DESPITE TENS OF MILLIONS OF DOLLARS SPENT ON WATER QUALITY MANAGEMENT, ADEQUATE LOAD AND RESPONSE DATA

ARE AVAILABLE FOR LESS THAN A DOZEN WATER BODIES. IN THIS PAPER, THE PREDICTIVE CAPABILITY OF THE "U.S. OECD-VOLLENWEIDER-ROSE-LEE AND JONES" PHOSPHORUS LOAD-RESPONSE MODELS WERE EXAMINED. IMPLICATIONS OF THE ANALYSES ARE INCLUDED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N7

IRIS ACCESSION NUMBER: EW009538

PUBLICATION DATE: JUL 83

TITLE: STEP PRESSURE SEWERS ARE A VIABLE WASTEWATER COLLECTION ALTERNATIVE.

PERSONAL AUTHOR: TOLLEFSON, DAVID J.; KELLY, ROBERT F.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *CALIFORNIA; *CASE STUDIES; CONSTRUCTION; ENVIRONMENTAL IMPACT; GROUNDWATER; EQUIPMENT; MAINTENANCE; *OPERATIONS (WASTEWATER); *PRESSURE SEWERS; SEWERS; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 1004-1014P.

ABSTRACT: DATE FOR A CALIFORNIA COMMUNITY WERE ANALYZED. CONDITIONS FAVORING PRESSURE SEWERS FOR SEPTIC TANK EFFLUENTS INCLUDE A HIGH GROUNDWATER TABLE, UNDULATING TERRAIN, AND UNSTABLE SOIL CONDITIONS. CONSTRUCTION, OPERATION, AND MAINTENANCE DATA ARE INCLUDED IN THE ARTICLE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N7

IRIS ACCESSION NUMBER: EW009539

PUBLICATION DATE: JUL 83

TITLE: COMPUTING DISCHARGE FROM LARGE COMBINED SEWER OVERFLOWS.

PERSONAL AUTHOR: GRAHAM, M. J.; KHAYER, M. A.

DESCRIPTOR: *MICHIGAN; *EVALUATION; *MODELS; *PERFORMANCE EVALUATION; *SEWER OVERFLOW; *PREDICTION; *SURFACE RUNOFF; *WASTEWATER COLLECTION; *WATER QUALITY

DESCRIPTIVE NOTE: 1015-1022P.

ABSTRACT: IT IS VERY DIFFICULT TO MEASURE FLOWS IN LARGE CONDUITS, AND TRADITIONAL METHODS CAN SELDOM BE USED WITHOUT MODIFICATION FOR PARTICULAR SITUATIONS. A STUDY WAS CONDUCTED IN THE DETROIT, MICHIGAN AREA TO CALIBRATE AND VERIFY FIVE INTERACTING COMPUTER MODELS FOR COMBINED SEWER OVERFLOWS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N7

IRIS ACCESSION NUMBER: EW009540

PUBLICATION DATE: JUL 83

TITLE: JET-VAC GETS ARIZONA SEWERS CLEANER.

DESCRIPTOR: *CLEANING; *COSTS; *EQUIPMENT; *MAINTENANCE; *SEWERS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 20AP.

ABSTRACT: USE OF A COMBINATION SEWER JET VACUUM MACHINE IS DESCRIBED. THE MACHINE HAS DEMONSTRATED THAT IT IS CHEAPER AND FASTER FOR CLEANING SEWERS THAN PREVIOUS TECHNIQUES USED.

AVAILABILITY: AMERICAN CITY & COUNTY; V98 N7

IRIS ACCESSION NUMBER: EW009541

PUBLICATION DATE: JUL 83

TITLE: FOR A RELIABLE WATER SUPPLY, COST COMES SECOND.

DESCRIPTOR: *DRINKING WATER; ECONOMICS; *FUNDING; *FACILITIES; *NEW MEXICO; *PLANNING; *PROJECT DEVELOPMENT; *WATER RIGHTS; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 27-29P.

ABSTRACT: DESCRIBED IS THE EFFORT OF A NEW MEXICO COMMUNITY TO OBTAIN A SUPPLEMENTAL WATER SUPPLY. THE CITY OBTAINED WATER RIGHTS AND FUNDING TO PROVIDE THEM A SYSTEM THAT SHOULD SERVE FUTURE NEEDS.

AVAILABILITY: AMERICAN CITY & COUNTY; V98 N7

IRIS ACCESSION NUMBER: EW009545

PUBLICATION DATE: 82

TITLE: PROCEEDINGS OF THE TWENTY-FOURTH ANNUAL PUBLIC WATER SUPPLY ENGINEERS' CONFERENCE - UNCONVENTIONAL WATER TREATMENT.

DESCRIPTOR: COAGULATION; *CONFERENCE PROCEEDINGS; DISINFECTION; *DRINKING WATER; *FACILITIES; FILTRATION; *OPERATIONS (WATER); *WATER TREATMENT

DESCRIPTIVE NOTE: 122P. PRICE: $15.00

ABSTRACT: THIS PUBLICATION CONTAINS PAPERS PRESENTED AT THE 24TH ANNUAL PUBLIC WATER SUPPLY ENGINEERS' CONFERENCE ON UNCONVENTIONAL WATER TREATMENT HELD IN CHAMPAIGN, ILLINOIS. TWELVE PAPERS AND ONE PANEL DISCUSSION ARE INCLUDED.

AVAILABILITY: UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, ENGINEERING PUBLICATIONS OFFICE, 112 ENGINEERING HALL, 1308 W. GREEN STREET, URBANA, IL 61801

IRIS ACCESSION NUMBER: EW009547
PUBLICATION DATE: APR 83

TITLE: ANALYSIS OF GEOTHERMAL WASTES FOR HAZARDOUS COMPONENTS.

PERSONAL AUTHOR: HAGMANN, E. L.; AND OTHERS

DESCRIPTOR: *GEOTHERMAL WASTES; *HAZARDOUS MATERIALS; *RESEARCH; *SAMPLING

DESCRIPTIVE NOTE: 101P. PB83-183680; PRICE CODE: PC A06/MF A01

ABSTRACT: REGULATIONS GOVERNING THE DISPOSAL OF HAZARDOUS WASTES LED TO AN ASSESSMENT FOR GEOTHERMAL SOLID WASTES FOR POTENTIALLY HAZARDOUS PROPERTIES. SAMPLES WERE COLLECTED FROM THREE ACTIVE GEOTHERMAL SITES IN THE WESTERN UNITED STATES: THE GEYSERS, IMPERIAL VALLEY, AND NORTHWESTERN NEVADA. APPROXIMATELY 20 SAMPLES WERE ANALYZED FOR CORROSIVITY, EP TOXICITY, RADIOACTIVITY, AND BIOACCUMULATION POTENTIAL. THE SAMPLES WERE FURTHER CHARACTERIZED BY ANALYSIS FOR CATIONS, ANIONS, MOISTURE CONTENT, PRIORITY POLLUTANTS, AND ADDITIONAL TRACE METALS IN THE LEACHATE. IN ADDITION, AN AQUEOUS EXTRACTION WAS CONDUCTED AT AMBIENT PH. THIS STUDY CHARACTERIZED SAMPLES FROM A LIMITED GEOGRAPHICAL AREA AND RESULTS CANNOT BE EXTRAPOLATED TO OTHER GEOTHERMAL RESOURCE AREAS (GRA).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009548

PUBLICATION DATE: MAY 82

TITLE: BENEFITS AND IMPLEMENTATION POTENTIAL OF WASTEWATER AQUACULTURE.

DESCRIPTOR: *AQUACULTURE; *PERFORMANCE EVALUATION; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 164P. PB83-191601; PRICE CODE: PC A08/MF A01

ABSTRACT: THIS STUDY HAS ATTEMPTED TO ANALYZE THE BENEFITS AND CONSTRAINTS OF WASTEWATER AQUACULTURE TECHNOLOGY IN ORDER TO PROVIDE INFORMATION AND RECOMMENDATIONS THAT MAY FURTHER THE DEVELOPMENT OF THIS TECHNOLOGY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009549

PUBLICATION DATE: APR 83

TITLE: CHROMATOGRAPHY FOR POLLUTION AND TOXICOLOGICAL ANALYSIS. JULY, 1978-APRIL, 1983 (CITATIONS FROM THE ENERGY DATA BASE).
DESCRIPTOR: *AIR POLLUTION; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *CHROMATOGRAPHY; *LABORATORY PROCEDURES; *TOXICOLOGY; *WATER POLLUTION

DESCRIPTIVE NOTE: 439P. PB83-863985; PRICE CODE: PC N01/MF N01

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING CHROMATOGRAPHIC ADSORPTION PROCESSES OF WATER AND AIR POLLUTANTS AND TOXINS GENERATED PRIMARILY BY FOSSIL-FUEL AND NUCLEAR POWER PLANTS AND OIL DRILLING OPERATIONS. IDENTIFICATION OF POLLUTANTS IN OIL SHALE PROCESS WATERS; DIESEL, GASOLINE, AND GASOHOL INTERNAL COMBUSTION ENGINE EXHAUST; HYDROCARBON COMPOSITION IN WATER DUE TO PETROLEUM SEEPAGE; AND, DETERMINATION OF TOXIC SUBSTANCES IN THE AIR, ARE DISCUSSED RELATIVE TO CHROMATOGRAPHIC PROCEDURES. PERFORMANCE EVALUATIONS FOR VARIOUS ADSORBENTS ARE ALSO INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 354 CITATIONS, 66 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009550

PUBLICATION DATE: OCT 82

TITLE: CONTROL OF HALOFORM PRODUCTION DURING CHLORINATION OF NATURALLY OCCURRING COMPOUNDS THROUGH PRE-OZONATION.
PERSONAL AUTHOR: HAYS, LLOYD M.; AND OTHERS

DESCRIPTOR: *CHLORINATION; *ORGANIC COMPOUNDS; *THM; *TRIHALOMETHANES; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 53P. PB83-191825. PRICE CODE: PC A04/MF A01.

ABSTRACT: TRIHALOMETHANE (THM) CAN BE PRODUCED UPON CHLORINATION OF WATER CONTAINING NATURALLY OCCURRING ORGANIC COMPOUNDS. COMPOUNDS INVESTIGATED HERE WERE RESORCINOL, PHLOROGLUCINOL, VANILLIN, SYRINGALDEHYDE, TRYPTOPHAN, INDOLE, AND ALANINE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009551

PUBLICATION DATE: APR 83

TITLE: DESIGN PRINCIPLES FOR WETLAND TREATMENT SYSTEMS.

PERSONAL AUTHOR: HAMMER, DAVID; KADLEC, ROBERT H.

DESCRIPTOR: *DESIGN; ECONOMICS; ENVIRONMENTAL IMPACT; *FACILITIES; *MODELS; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT; *WETLANDS

DESCRIPTIVE NOTE: 257P. PB83-188722; PRICE CODE: PC A12/MF A01

ABSTRACT: PUBLISHED DATA PERTAINING TO THE TREATMENT OF WASTEWATER BY 26 WETLANDS HAVE BEEN ASSEMBLED AND ANALYZED TO IDENTIFY GENERAL PRINCIPLES FOR SUCCESSFUL DESIGN OF WETLAND FACILITIES. SOURCE OF OPERATING DATA HAVE BEEN TABULATED. PERFORMANCE IS CORRELATED WITH OVERALL SYSTEM FEATURES BUT CANNOT BE PREDICTED ON THE CURRENT BASIS. A SIMPLIFIED COMPARTMENT MODEL IS PRESENTED. THE SELECTION OF NATURAL SITES AND THE PHYSICAL FACILITIES ASSOCIATED WITH WETLAND TREATMENT ARE DISCUSSED. A PROTOCOL FOR SITE REVIEW IS PRESENTED. OPERATIONAL TECHNIQUES AND THE USE OF CONSTRUCTED (ARTIFICIAL) WETLANDS ARE ALSO CONSIDERED. WASTEWATER IMPACT ON WETLAND AND THE ECONOMICS OF WETLAND TREATMENT ARE DISCUSSED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009552

PUBLICATION DATE: DEC 82

TITLE: EVALUATION OF BIOLOGICAL ACTIVATED CARBON FOR INDUSTRIAL WATER REUSE.

PERSONAL AUTHOR: SCHWARTZ, MAYER; AND OTHERS

DESCRIPTOR: *ACTIVITED CARBON; *BIOLOGICAL ACTIVATED CARBON; *INDUSTRIAL WASTEWATER; *OPERATIONS (WASTEWATER); *TECHNOLOGY; *WATER REUSE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 114P. PB83-191957; PRICE CODE: PC A06/MF A01

ABSTRACT: THE BIOLOGICAL ACTIVATED CARBON (BAC) TECHNOLOGY WAS TESTED FOR THE PRODUCTION OF REUSABLE WATER, LOW IN ORGANICS CONCENTRATION, FROM INDUSTRIAL WASTEWATER. EFFLUENT STREAMS FROM AN OIL REFINERY, A PULP MILL, A TEXTILE DYEING HILL, AND A FUNGICIDE PLANT WERE STUDIED. THE BATCH-SCALE EXPERIMENTAL PLAN USED INCLUDED THE STEP-WISE TECHNIQUE OF OZONATION, RESPIROMETRIC BIODEGRADATION, AND ACTIVATED CARBON ADSORPTION ISOTHERMS AND KINETICS. THIS TECHNIQUE SIMULATES THE INDIVIDUAL PROCESSES COMPRISING THE BAC TECHNOLOGY. A FOLLOW-UP EXPERIMENTAL PLAN INCLUDED CONTINUOUS-FLOW SHORT COLUMN GRANULAR ACTIVATED CARBON (GAC) TESTS WHICH SIMULATE A BAC SYSTEM.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009553

PUBLICATION DATE: APR 83

TITLE: ION SELECTIVE ELECTRODES. 1970-MARCH 1983 (CITATIONS FROM THE ENGINEERING INDEX DATA BASE).

DESCRIPTOR: *ANALYTICAL METHODS; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; DESIGN; *ELECTRODES; *ION SELECTIVE ELECTRODES; *LABORATORY EQUIPMENT; PERFORMANCE EVALUATION; *RESEARCH

DESCRIPTIVE NOTE: 258P. PB83-804823; PRICE CODE: PC N01/MF N01

ABSTRACT: THESE WORLDWIDE CITATIONS COVER RESEARCH ON ELECTRODES THAT ARE SENSITIVE TO ONLY CERTAIN TYPES OF IONS. THIS INCLUDES THEIR DESIGN, PERFORMANCE EVALUATION, THEORY, APPLICATIONS, ANALYTICAL METHODS, AND SENSITIVITY. (THIS UPDATED BIBLIOGRAPHY CONTAINS 249 CITATIONS, 61 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009554

PUBLICATION DATE: APR 83

TITLE: METHANE FROM WASTE WATER AND SLUDGE. 1977-APRIL, 1983 (CITATIONS FROM THE ENERGY DATA BASE).

DESCRIPTOR: *AGRICULTURAL WASTES; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; ENERGY; EQUIPMENT; *INDUSTRIAL WASTEWATER; *METHANE; MICROORGANISMS; *SLUDGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 289P. PB83-863621; PRICE CODE: PC N01/MF N01

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE PRODUCTION OF METHANE FROM LIQUID WASTES. THE LIQUID WASTES INCLUDE AGRICULTURAL WASTES, MUNICIPAL SEWAGE, AND INDUSTRIAL WASTEWATER. THE CONVERSION PROCESS IS ANAEROBIC DIGESTION OF THE LIQUID WASTES, AND THE CITATIONS COVER THE ACTIVE MICROORGANISMS, THE DIGESTER EQUIPMENT, AND ANALYSES OF SUPPLIES, APPLICATIONS AND HEATING VALUE OF THE METHANE. A FEW CITATIONS COVER AEROBIC DIGESTION PROCESSES AND CHEMICAL REACTORS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 271 CITATIONS, 104 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009555

PUBLICATION DATE: 82

TITLE: ORGANIC N-CHLORAMINES: CHEMISTRY AND TOXICOLOGY.

PERSONAL AUTHOR: SCULLY, FRANK E., JR.; BEMPONG, MAXWELL A.

DESCRIPTOR: *CHEMISTRY; *CHLORINE; *CHLORAMINES; *ANALYTICAL TECHNIQUES; *TOXICOLOGY; *WATER TREATMENT

DESCRIPTIVE NOTE: 8P. PB83-187898; PRICE CODE: PC A02/MF A01

ABSTRACT: THE STABILITY OF AQUEOUS SOLUTIONS OF ORGANIC N-CHLORAMINES, SUSPECTED OF CONTAMINATING CHLORINATED WATER, HAS BEEN STUDIED. TWO FACTORS INFLUENCE THE DECOMPOSITION OF SOLUTIONS OF N-CHLOROPIPERIDINE AND N-CHLORODIETHYLAMINE: A SPONTANEOUS DECOMPOSITION AND PHOTODECOMPOSITION. SINCE SOLUTIONS OF THESE COMPOUNDS ARE RELATIVELY LONG-LIVED, A NEED FOR AN ANALYTICAL METHOD FOR THEIR IDENTIFICATION IS DISCUSSED. A NEW METHOD IS DESCRIBED WHICH INVOLVES REACTION OF ORGANIC N-CHLORAMINES WITH ARENESULFINIC ACID SALTS. THE METHOD GIVES HIGH YIELDS OF STABLE ARENESULFONAMIDES. SEVERAL TOXICOLOGICAL STUDIES OF N-CHLOROPIPERIDINE ARE DESCRIBED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009556

PUBLICATION DATE: APR 83

TITLE: POLLUTION DETECTION. JUNE, 1970-APRIL, 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *DESIGN; *EQUIPMENT; *MONITORING; *POLLUTION DETECTION

DESCRIPTIVE NOTE: 273P. PB83-864017; PRICE CODE: PC N01/MF N01

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE DESIGN AND TESTING OF EQUIPMENT USED TO DETECT AND MONITOR POLLUTANTS. EXCLUDED ARE MONITORING DATA COMPILATIONS, UNLESS SUCH FIELD OPERATIONS ARE USED TO COMPARE DIFFERENT TYPES OF INSTRUMENTS. EQUIPMENT TESTED INCLUDES DETECTORS FOR PARTICULATE MATTER, AEROSOLS, FIBERS, ALDEHYDES, SULFUR OXIDES, NITROGEN OXIDES, OZONE, VOLATILE ORGANIC COMPOUNDS, PESTICIDES, FLUORINE COMPOUNDS, AND NON-METHANE HYDROCARBONS. THE METHODOLOGY INCLUDES BOTH THE EQUIPMENT CHARACTERISTICS AND THE ASSOCIATED ANALYTICAL TECHNIQUES. CALIBRATION TECHNIQUES AND STANDARD GAS SAMPLES FOR INSTRUMENT VALIDATION ARE ALSO INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 222 CITATIONS, 125 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009557

PUBLICATION DATE: DEC 82

TITLE: TERRACED PASTURE FOR DISPOSAL OF DAIRY YARD RUNOFF.

PERSONAL AUTHOR: HEGG, R. O.; AND OTHERS

DESCRIPTOR: *AGRICULTURAL WASTES; *ALTERNATIVE TECHNOLOGY; *DAIRY WASTES; *PERFORMANCE EVALUATION; *TERRACE PASTURES; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 51P. PB83-191940; PRICE CODE: PC A04/MF A01

ABSTRACT: AN ALTERNATIVE SYSTEM OF HANDLING AND DISPOSING OF MILKING BARN WASTEWATER AND FEEDLOT RUNOFF WATER WAS EVALUATED FOR THREE YEARS. THIS SYSTEM WAS ESTABLISHED ON A 50-COW DAIRY FARM IN SOUTH CAROLINA AND CONSISTED OF UTILIZING A PASTURE AREAS DOWNSLOPE FROM A DAIRY TO INFILTRATE AND FILTER THE LIQUID, NUTRIENTS AND SOLIDS FROM THE MILKING BARN AND THE DAIRY FEEDLOT RUNOFF WATER. THE PASTURE WAS MODIFIED BY THE ADDITION OF A SPREADER TERRACE AND THREE LEVEL TERRACES TO DISTRIBUTE THE RUNOFF WATER. WASTEWATER DISCHARGED FROM THE MILKING BARN TYPICALLY INFILTRATED THE SOIL BEFORE REACHING THE TERRACE SYSTEM. SEVERAL OF THE SMALL RAINSTORMS PRODUCED RUNOFF FROM THE DAIRY FEEDLOT WHICH WAS COMPLETELY INFILTRATED BY THE TERRACED PASTURE. THE CONCENTRATION OF THE RUNOFF WATER LEAVING THE DAIRY FEEDLOT WAS REDUCED BY THE TIME IT LEFT THE TERRACED PASTURE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009558

PUBLICATION DATE: 82

TITLE: TOXICOLOGY OF ORGANIC DRINKING WATER CONTAMINANTS: TRICHLOROMETHANE, BROMODICHLOROMETHANE, DIBROMOCHLOROMETHANE AND TRIBROMOMETHAN

PERSONAL AUTHOR: MUNSON, ALBERT E.; AND OTHERS

DESCRIPTOR: *CONTAMINANTS; *DRINKING WATER; *HALOMETHANES; *ORGANIC COMPOUNDS; *RESEARCH REPORTS; *TOXICOLOGY

DESCRIPTIVE NOTE: 12P. PB83-187872; PRICE CODE: PC A02/MF A01

ABSTRACT: THIS STUDY EVALUATED THE SUBCHRONIC TOXICITY OF SELECTED HALOMETHANES WHICH ARE DRINKING WATER CONTAMINANTS. THE COMPOUNDS STUDIED WERE TRICHLOROMETHANE, BROMODICHLOROMETHANE, DIBROMOCHLOROMETHANE AND TRIBROMOMETHANE. SUBCHRONIC 14-DAY GAVAGE STUDIES WERE PERFORMED WITH THE USE OF DOSES ENCOMPASSING ONE-TENTH THE LD50 FOR THE COMPOUNDS. A 90-DAY GAVAGE STUDY OF ONE OF THE COMPOUNDS, TRICHLOROMETHANE, WAS ALSO DONE. PARAMETERS OBSERVED INCLUDED BODY AND ORGAN WEIGHTS, HISTOPATHOLOGY, HEMATOLOGY, CLINICAL CHEMISTRIES, AND HEPATIC MICROSOMAL ENZYME ACTIVITIES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009559

PUBLICATION DATE: DEC 82

TITLE: USER'S MANUAL FOR THE WATER MANAGEMENT (WATMAN) MODEL.

PERSONAL AUTHOR: DEB, ARUN K.
DESCRIPTOR: *COSTS; *MAINTENANCE; *MANAGEMENT; *MANUALS; *MODELS; *OPERATIONS (WATER); *PLANNING; *WATER DISTRIBUTION; *WATER DEMAND; *WATER RESOURCES; *WATMAN; *WATER TREATMENT

DESCRIPTIVE NOTE: 300P. PB83-188110; PRICE CODE: PC A13/MF A01

ABSTRACT: THE WATER MANAGEMENT (WATMAN) MODEL IS DESIGNED TO ACCOMMODATE REGIONAL MANAGEMENT OF WATER FOR REGIONS CONTAINING NO MORE THAN TEN CITIES. USED TO EVALUATE VARIOUS ALTERNATIVES OF LONG-TERM PLANNING AND MANAGEMENT OF THE TOTAL URBAN WATER SYSTEM AND TO HELP WATER AND WASTEWATER MANAGERS FIND COST-EFFECTIVE AND IMPLEMENTABLE PLANS FOR THEIR CITIES. THE WATMAN MODEL INCORPORATES THE FOLLOWING COMPONENTS: (1) WATER SOURCES, INCLUDING RECYCLED WATER; (2) WATER DEMAND BY TYPE OF QUALITY REQUIRED; AND (3) WATER TREATMENT AND DISTRIBUTION. THE PRIMARY FUNCTION OF THE MODEL IS TO DERIVE CAPITAL COSTS, OPERATION AND MAINTENANCE COSTS, SALVAGE VALUE, AND PRESENT WORTH COSTS. IT ALSO SUPPLIES SUMMARY COST INFORMATION FOR THE ENTIRE OPERATION. THE SYSTEM CONTAINS A LIBRARY OF 63 UNIT PROCESSES THAT MAY BE INCLUDED IN THE DESIGN OF A WATER SUPPLY MANAGEMENT SYSTEM.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009560

PUBLICATION DATE: DEC 82

TITLE: WASTEWATER TREATMENT - COST ESTIMATES FOR CONSTRUCTION OF PUBLICLY OWNED FACILITIES, 1982 NEEDS SURVEY.

PERSONAL AUTHOR: FERGUSON, SHARON L.; HUANG, WEN

DESCRIPTOR: *CONSTRUCTION; *COSTS; *FACILITIES; FEDERAL ROLE; *MUNICIPALITIES; MANAGEMENT; PLANNING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: MAG TAP EPA/CF-83/004. TAPES CAN BE PREPARED IN MOST STANDARD 7 OR 9 TRACK RECORDING MODES FOR ONE-HALF INCH TAPE. PB83-173963; PRICE CODE: CP T08

ABSTRACT: COMPREHENSIVE COST ESTIMATES OF CONSTRUCTING ALL GRANT-ELIGIBLE MUNICIPAL TREATMENT WORKS NEEDED BY EXISTING AND FUTURE POPULATIONS. THE ONLY COMPLETE INVENTORY OF MUNICIPAL TREATMENT WORKS. A COMPREHENSIVE TECHNICAL AND COST DATA BASE FOR MANAGEMENT, PROGRAMMATIC, AND TECHNICAL ANALYSES OF THE CONSTRUCTION GRANTS PROGRAM. INCLUDES A PRELIMINARY ANALYSIS OF THE FUTURE FEDERAL SHARE OF TREATMENT WORKS COST.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009561
PUBLICATION DATE: DEC 82

TITLE: WASTEWATER TREATMENT - COST ESTIMATES FOR CONSTRUCTION OF PUBLICLY OWNED FACILITIES, 1982 NEEDS SURVEY. TECHNICAL POLICY AND PROCEDURES CATEGORIES I-V.

PERSONAL AUTHOR: HUANG, WEN

DESCRIPTOR: *COSTS; *CONSTRUCTION; *FACILITIES: *FACILITY NEEDS; *SURVEYS; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 237P. PB83-173955; PRICE CODE: PC A11/MF A01

ABSTRACT: THIS REPORT PROVIDES THE BEST ESTIMATE AVAILABLE OF THE NATIONWIDE COSTS OF COMPLYING WITH THE GOALS OF THE 1981 CONSTRUCTION GRANT AMENDMENTS TO THE CLEAN WATER ACT. THIS SURVEY MODIFIES AND UPDATES COMPREHENSIVE COST ESTIMATES OF THE FIVE PREVIOUS SURVEYS FOR CONSTRUCTING ALL GRANT-ELIGIBLE MUNICIPAL TREATMENT WORKS NEEDED BY EXISTING AND FUTURE POPULATIONS. ADVANCE WORK COMPLETED DURING THE 1982 NEEDS SURVEY WILL PROVIDE THE FOUNDATION FOR LINKING TREATMENT FACILITIES WITH THEIR RECEIVING WATER BODIES AND WATER QUALITY IMPACTS AS PART OF THE 1984 NEEDS SURVEY. THIS IS THE ONLY COMPLETE INVENTORY OF MUNICIPAL TREATMENT WORKS (RESTRICTED TO PUBLICLY-OWNED WASTEWATER CONVEYANCE AND TREATMENT FACILITIES WHICH INCLUDE SEWAGE TREATMENT PLANTS, SEWERS, AND OTHER TYPES OF RELATED TREATMENT FACILITIES.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009562

PUBLICATION DATE: APR 83

TITLE: WATER QUALITY ACTS: STANDARDS, REGULATIONS, AND REACTIONS. 1970-APRIL 1983 (CITATIONS FROM POLLUTION ABSTRACTS).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *LEGISLATION; *REGULATIONS; *STANDARDS; *WATER QUALITY

DESCRIPTIVE NOTE: 221P. PB83-8636[illegible]3; PRICE CODE: PC N01/MF N01

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING STANDARDS, REGULATIONS, AND PUBLIC AND SPECIAL INTEREST REACTIONS TO VARIOUS WATER QUALITY ACTS OR LAWS. TECHNICAL, ENVIRONMENTAL, ECONOMIC, AND POLITICAL ASPECTS OF THESE LAWS ARE CONSIDERED. ATTENTION IS ALSO GIVEN TO METHODS AND PROBLEMS OF IMPLEMENTATION AND ENFORCEMENT. (THIS UPDATED BIBLIOGRAPHY CONTAINS 272 CITATIONS, 18 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009563
PUBLICATION DATE: APR 83

TITLE: WATER QUALITY: PATHOGENIC BACTERIA. 1977-APRIL, 1983 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *BACTERIA; *PATHOGENS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 267P. PB83-863605; PRICE CODE: PC N01/MF N01

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING WATER QUALITY, WASTEWATER TREATMENT AND THE PRESENCE, SURVIVAL, AND HAZARDS OF PATHOGENIC MICROORGANISMS. THE PROBABLE SOURCES AND FACTORS AFFECTING THE SURVIVAL OF THE BACTERIA ARE CONSIDERED. DETECTION METHODS AND PHYSICAL AND CHEMICAL TREATMENT METHODS ARE DISCUSSED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 188 CITATIONS, 38 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009564

PUBLICATION DATE: 82

TITLE: WATERBORNE OUTBREAK CONTROL: WHICH DISINFECTANT.

PERSONAL AUTHOR: AKIN, ELMER W.; AND OTHERS

DESCRIPTOR: *DISINFECTANTS; *DRINKING WATER; *CHLORINATION; CHLORINE DIOXIDE; CHLORAMINES; OZONE; *PATHOGENS; *PUBLIC HEALTH; *WATER SUPPLY

DESCRIPTIVE NOTE: 8P. PB83-187906; PRICE CODE: PC A02/MF A01

ABSTRACT: THIS FINDING INDICATES THAT WATERBORNE MICROBIAL PATHOGENS REMAIN AS A POTENTIAL HEALTH THREAT AND UNDERSCORES THE IMPORTANCE OF DISINFECTION. FROM THE OUTSET, CHLORINATION HAS BEEN THE DRINKING WATER DISINFECTANT OF CHOICE IN THE COUNTRY. NUMEROUS STUDIES HAVE DEMONSTRATED ITS ABILITY TO INACTIVATE BACTERIAL, VIRAL, AND PROTOZOAL PATHOGENS WHEN APPLIED UNDER PROPER CONDITIONS. HOWEVER, THE FINDING THAT CHLORINATED ORGANICS THAT ARE POTENTIALLY CARCINOGENIC ARE FORMED HAS PROMPTED AN EVALUATION OF ALTERNATIVE DISINFECTANTS. THE VIABLE ALTERNATIVES TO CHLORINE CURRENTLY UNDER CONSIDERATION FOR WIDESPREAD USE ARE OZONE, CHLORINE DIOXIDE, AND CHLORAMINES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW009960
PUBLICATION DATE: 83

TITLE: WATER, WATER EVERYWHERE, BUT...NOTES FOR THE TEACHER, REPORT WRITING DIRECTIONS AND EXPERIMENTS.

PERSONAL AUTHOR: JACOBSON, CLIFF

DESCRIPTOR: ACID RAIN; *INSTRUCTIONAL MATERIALS; LABORATORY PROCEDURES; *SECONDARY EDUCATION; WASTES; WATER; *WATER POLLUTION; *WATER QUALITY; *WATER RESOURCES; *WATER TREATMENT

DESCRIPTIVE NOTE: 93P. PRICE: $9.95 PLUS POSTAGE.

ABSTRACT: PROVIDED IN THIS TEACHING PACKAGE ARE MATERIALS THAT CLEARLY AND SIMPLY UNVEIL THE MYSTERIES OF WATER POLLUTION. MATERIALS, WRITTEN ON AN APPROXIMATE SEVENTH-GRADE LEVEL, INCLUDE: (1) A STUDENT READING UNIT; (2) WATER QUALITY FACTORS PAMPHLET; (3) EXPERIMENTS; AND (4) TEACHER'S GUIDE TO FIELD TESTING A LOCAL WATERWAY. THE STUDENT READING UNIT IS THE BASIC TEXT, COMPLETE WITH DIAGRAMS, QUESTION SHEETS, AND EXAMINATION. THE WATER QUALITY FACTORS PAMPHLET (WRITTEN WITH THE ASSUMPTION THAT STUDENTS HAVE NO BACKGROUND IN CHEMISTRY AND LIMITED KNOWLEDGE OF MATHEMATICS AND GENERAL SCIENCE) IS A REFERENCE UNIT LISTING A VARIETY OF POPULAR CHEMICAL, BIOLOGICAL, AND PHYSICAL TESTS WHICH CAN BE PERFORMED ON A WATERWAY. IN ADDITION, INFORMATION IS GIVEN ABOUT THE ENVIRONMENTAL EFFECTS AND TOXIC LIMITS OF EACH POTENTIAL POLLUTANT. SIMPLE IN-CLASS/FIELD EXPERIMENTS, PRINTED ON LOOSE SHEETS FOR EASE OF REPRODUCTION, FOCUS ON: EFFECTS OF BIODEGRADABLE WASTE ON DISSOLVED OXYGEN; THERMAL POLLUTION; EFFECTS OF THERMAL POLLUTION OF FISH METABOLISM; MEASURING AMOUNT OF DISSOLVED OXYGEN IN A WATER SAMPLE; DETERMINING NUMBER OF COLIFORM BACTERIA IN WATER SAMPLES; AND MEASURING STREAM VELOCITY/VOLUME. TEACHERS NOTES FOR EXPERIMENTS, ANSWER KEYS, A TURBIDITY COLOR CHART, AND TEST KIT/REAGENT LIST ARE INCLUDED. ALL MATERIALS ARE DESIGNED FOR BUT NOT LIMITED TO GRADES 7-10.

AVAILABILITY: HACH COMPANY, P.O. BOX 389, LOVELAND, CO 80539

IRIS ACCESSION NUMBER: EW009961

TITLE: FINAL REPORT - OREGON ON-SITE EXPERIMENTAL SYSTEMS PROGRAM.

PERSONAL AUTHOR: RONAYNE, MARK P.; AND OTHERS

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *COSTS; *DESIGN; *INDUSTRIAL WASTES; *MUNICIPAL WASTES; *ONSITE SEWAGE TREATMENT; *ONSITE SEWAGE DISPOSAL; *OPERATIONS (WASTEWATER); *OREGON; *RECOMMENDATIONS; *PERFORMANCE EVALUATION; *SEPTIC TANKS; *WASTEWATER TREATMENT

ABSTRACT: REPORTED ARE DATA ON A VARIETY OF TYPES OF ON-SITE SUBSURFACE SEWAGE TREATMENT AND DISPOSAL USED IN OREGON. SOIL AND SITE CONDITIONS, ACREAGE ESTIMATES AND CLIMATIC INFORMATION, WHERE APPLICABLE, ARE DISCUSSED. SYSTEM DESIGNS AND MONITORING METHODS ARE INCLUDED.

PERFORMANCE IS EVALUATED AND DISCUSSED. CONCLUSIONS ARE DRAWN AND RECOMMENDATIONS MADE. IN ADDITION THERE IS A CHAPTER ON CHARACTERISTICS OF RESIDENTIAL AND INDUSTRIAL SEPTIC TANK EFFLUENTS AND A CHAPTER AO SUBSURFACE SYSTEM COSTS.

AVAILABILITY: DEPARTMENT OF ENVIRONMENTAL QUALITY, WATER QUALITY DIVISION, P.O. BOX 1760, PORTLAND, OR 97207

IRIS ACCESSION NUMBER: EW009962

PUBLICATION DATE: 83

TITLE: TSCA'S IMPACT ON SOCIETY AND CHEMICAL INDUSTRY.

PERSONAL AUTHOR: INGLE, GEORGE W.

DESCRIPTOR: *CHEMICALS; *CONFERENCE PROCEEDINGS; COSTS; COST BENEFIT ANALYSIS; EDUCATION; INDUSTRY; *LEGISLATION; *POLLUTION; *REGULATIONS; *SOCIETAL PROBLEMS; *TOXIC SUBSTANCES; *TOXIC SUBSTANCES CONTROL ACT

DESCRIPTIVE NOTE: 244P. PRICE: $34.95.

ABSTRACT: THIS PUBLICATION IDENTIFIES AND EVALUATES MAJOR EFFECTS OF THE TOXIC SUBSTANCES CONTROL ACT (TSCA) ON THE CHEMICAL INDUSTRY AND ON SOCIETY AS A WHOLE. INCLUDED ARE DETECTION AND ANALYSIS OF THESE EFFECTS FROM A VARIETY OF VIEWPOINTS. AN EFFORT IS ALSO MADE TO DELINEATE BENEFICIAL AND DETRIMENTAL CONSEQUENCES OF THIS LAW.

AVAILABILITY: AMERICAN CHEMICAL SOCIETY, DISTRIBUTION OFFICE DEPT. 21, 1155 SIXTEENTH STREET, N.W., WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW009964

PUBLICATION DATE: MAR 83

TITLE: RURAL LAKES PROJECT HANDBOOK.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *COSTS; *COST EFFECTIVENESS; *ENVIRONMENTAL IMPACT STATEMENTS; *ENVIRONMENTAL IMPACTS; *FACILITIES; LAKES; *MANAGEMENT; *OPERATIONS (WASTEWATER); *ONSITE WASTEWATER TREATMENT; *PLANNING; *PUBLIC HEALTH; *RECOMMENDATIONS; *RURAL AREAS; *SITE ANALYSIS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 41P.

ABSTRACT: THIS HANDBOOK RELATES MAJOR FINDINGS OF STUDIES OF WASTEWATER FACILITIES PLANNING DOCUMENTS OF SEVEN RURAL LAKE COMMUNITIES IN INDIANA, OHIO, MICHIGAN, WISCONSIN, AND MINNESOTA. THE FORMAT IS INTENDED TO BE USEFUL TO THE INTERESTED CITIZEN. THE HOMEOWNER WHO WANTS TO PREVENT OR CORRECT PROBLEMS WITH HIS ON-SITE SYSTEM WILL FIND CHAPTERS 1 AND 4 USEFUL. HOMEOWNERS AND CIVIC LEADERS SHOULD BENEFIT ALSO FROM THE COMMUNITY-WIDE PERSPECTIVE PRESENTED IN CHAPTERS 2, 3, AND 5 THROUGH 8. THE REPORT CONCLUDES THAT THE USE OF EXISTING ON-SITE SYSTEMS IS COST-EFFECTIVE WHEN COMPARED TO ANY CENTRALIZED ALTERNATIVE AS LONG AS ADVERSE WATER QUALITY AND PUBLIC HEALTH IMPACTS OF SUBSURFACE WASTE DISPOSAL CAN BE CONTROLLED.

AVAILABILITY: U. S. ENVIRONMENTAL PROTECTION AGENCY, REGION 5, 230 SOUTH DEARBORN STREET, CHICAGO, IL 60604

IRIS ACCESSION NUMBER: EW009970

PUBLICATION DATE: AUG 83

TITLE: A WATER UTILITY ENGINEER ASSESSES FUNDAMENTAL RESEARCH.

PERSONAL AUTHOR: MCGUIRE, MICHAEL J.

DESCRIPTOR: *OPERATIONS (WATER); *RESEARCH; *RESEARCH NEEDS; *WATER QUALITY; *WATER TREATMENT; *WATER UTILITIES

DESCRIPTIVE NOTE: 20-22,36NEWSP.

ABSTRACT: RESEARCH RELATED TO WATER QUALITY, WATER TREATMENT, AND THE WATER UTILITY INDUSTRY ARE DESCRIBED. FUTURE RESEARCH NEEDS ARE CONSIDERED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N8

IRIS ACCESSION NUMBER: EW009971

PUBLICATION DATE: AUG 83

TITLE: PUBLIC WATER SYSTEMS AND SUPERFUND: RECOVERING LOSSES CAUSED BY CONTAMINATION.

PERSONAL AUTHOR: THOMAS, K. M., JR.

DESCRIPTOR: *CONTAMINATION; *CERCLA; *CLAIMS; *EPA; *HAZARDOUS SUBSTANCES; *COURT DECISIONS; *POLLUTION; *SUPERFUND

DESCRIPTIVE NOTE: 385-389P.

ABSTRACT: THE COST OF REMOVING HAZARDOUS SUBSTANCES FROM DRINKING WATER SOURCES OR THE COST OF TAKING REMEDIAL ACTION IN THE EVENT OF LONG-TERM SOURCE CONTAMINATION MAY BE RECOVERABLE THROUGH THE FEDERAL SUPERFUND. PROVISIONS OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE AND LIABILITY ACT (CERCLA) DESCRIPTIONS OF COURT RULINGS IN CONNECTION WITH THE ACT, AND PROCEDURES FOR FILING CLAIMS AGAINST THOSE RESPONSIBLE FOR CONTAMINATION ARE DISCUSSED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N8

IRIS ACCESSION NUMBER: EW009972
PUBLICATION DATE: AUG 83

TITLE: ENGINEERING WATER WELLS.

PERSONAL AUTHOR: CARPENTER, CARL H.

DESCRIPTOR: *GROUNDWATER; *WATER RESOURCE DEVELOPMENT; *WATER RESOURCES; *WATER SUPPLY; *WATER WELLS

DESCRIPTIVE NOTE: 395-397P.

ABSTRACT: AS ENERGY COSTS RISE, GROUNDWATER USERS SHOULD SEEK TO OBTAIN THE MOST EFFICIENT WELLS POSSIBLE BY MEANS OF HYDROGEOLOGIC INVESTIGATIONS, TEST HOLES, AND ENGINEERED DESIGNS. APPROPRIATE METHODS OF DEVELOPING NEW WATER WELLS ARE DISCUSSED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N8

IRIS ACCESSION NUMBER: EW009973

PUBLICATION DATE: AUG 83

TITLE: GRANULAR ACTIVATED CARBON INSTALLATIONS.

PERSONAL AUTHOR: CULP, RUSSEL L.; CLARK, ROBERT M.

DESCRIPTOR: ACTIVATED CARBON; *COSTS; *DESIGN; *GRANUALR ACTIVATED CARBON; *EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); *OPERATIONS (WATER); *SURVEYS; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 398-405P.

ABSTRACT: THIS ARTICLE PRESENTS A COMPILATION AND SUMMARY OF DESIGN CRITERIA, PERFORMANCE, AND COST DATA FROM 22 OPERATING MUNICIPAL AND INDUSTRIAL GRANULAR ACTIVATED CARBON (GAC) INSTALLATIONS THAT TREAT WATER AND WASTEWATER OR PROCESS FOOD AND BEVERAGE PRODUCTS. IT ALSO PRESENTS SOME COST INFORMATION AND DESIGN DATA FOR WATER SYSTEMS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N8

IRIS ACCESSION NUMBER: EW009974

PUBLICATION DATE: AUG 83

TITLE: THE ANALYSIS OF ORGANOHALIDES IN WATER--AN EVALUATION UPDATE.

PERSONAL AUTHOR: DRESSMAN, RONALD C.; STEVENS, ALAN A.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *HALIDES; *INSTRUMENTATION; *LABORATORY PROCEDURES; *MEASUREMENT; *ORGANIC COMPOUNDS; *ORGANOHALIDES; *SAMPLING; *WATER QUALITY; *WATER ANALYSIS

DESCRIPTIVE NOTE: 431-434P.

ABSTRACT: DATA ACQUIRED DURING THE ROUTINE USE OF AN ORGANIC HALIDE ANALYZER ARE PRESENTED. THESE DATA WERE USED FOR JUDGING THE QUALITY OF MEASUREMENTS OF TOTAL, PURGEABLE, AND NONPURGEABLE ORGANIC HALIDES AS WELL AS FOR JUDGING THE INSTRUMENT'S DEPENDABILITY AND EASE OF OPERATION.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N8

IRIS ACCESSION NUMBER: EW009975

PUBLICATION DATE: AUG 83

TITLE: CATHODIC PROTECTION PAYS OFF.

DESCRIPTOR: *CATHODIC PROTECTION; *CORROSION; *EQUIPMENT; *MAINTENANCE; *OPERATIONS (WATER); *PREVENTIVE MAINTENANCE; *VIRGINIA; *WATER TREATMENT

DESCRIPTIVE NOTE: 34NEWSP.

ABSTRACT: DISCUSSED IS THE CATHODIC PROTECTION SYSTEM FOR CLARIFIERS FOR THE FAIRFAX COUNTY (VIRGINIA) WATER AUTHORITY. CATHODIC PROTECTION REVERSES THE NATURAL ELECTROCHEMICAL REACTION THAT CAUSES CORROSION IN A METALLIC STRUCTURE, THEREBY STOPPING THE PROBLEM AT ITS SOURCE.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N8

IRIS ACCESSION NUMBER: EW009976

PUBLICATION DATE: AUG 83

TITLE: WHY USE MODELS?

PERSONAL AUTHOR: KRAINE, GILBERT

DESCRIPTOR: *CONSTRUCTION; *DESIGN; *EQUIPMENT; *FACILITIES; *ENGINEERING; *MANAGEMENT; *MODELS

DESCRIPTIVE NOTE: 41-43P.

ABSTRACT: MODELS ILLUSTRATE HOW ALL ENGINEERING SYSTEMS WILL WORK TOGETHER, AND THUS CAN HELP CUT BACK ON MANY COMPLICATED DRAWINGS, CONSTRUCTION REWORK, AND DELAYS. EFFECTIVE MODELS USUALLY REPRESENT BETWEEN ONE-HALF TO ONE PERCENT OF TOTAL PROJECT COSTS; THEY GENERALLY PAY FOR THEMSELVES BY SAVING IN PLANNING AND DESIGN COSTS. MODELS ALSO ARE USEFUL AFTER CONSTRUCTION.

AVAILABILITY: CONSULTING ENGINEER; V61 N2

IRIS ACCESSION NUMBER: EW009977

PUBLICATION DATE: JUL 83

TITLE: WHICH DISC PLAYER FOR EDUCATION? A COMPARATIVE EVALUATION.

PERSONAL AUTHOR: LEVERIDGE, LEO L.; LYONS, DAVID S.

DESCRIPTOR: *AUDIOVISUAL AIDS; *COMPARATIVE EVALUATION; *COMPUTER APPLICATIONS; *MICROCOMPUTERS; *PERFORMANCE EVALUATION; *PROGRAM DUMPS; *VIDEODISCS

DESCRIPTIVE NOTE: 50-52,56P.

ABSTRACT: THIS ARTICLE PRESENTS A COMPARATIVE EVALUATION OF VIDEODISC PLAYERS THAT USE DIGITAL PROGRAM DUMPS AND THOSE THAT DO NOT. THE EVALUATORS CONCLUDE THAT WITH NEWER TECHNOLOGY NOW AVAILABLE THERE SEEMS TO BE NO GOOD REASON TO USE DIGITAL PROGRAM DUMPS RECORDED ON VIDEODISCS FOR EDUCATION.

AVAILABILITY: EDUCATIONAL 8 TNDUSTRIAL TELEVISION (E-I TV); V15 N7

IRIS ACCESSION NUMBER: EW009978

PUBLICATION DATE: AUG 83

TITLE: RESTORATION OF AQUIFERS.

PERSONAL AUTHOR: JOSEPHSON, JULIAN

DESCRIPTOR: *AQUIFERS; *CONTAMINATION; *CONTAINMENT; *COSTS; *GROUNDWATER; *IDENTIFICATION; *RECLAMATION; *WATER POLLUTION CONTROL; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 347A-350AP.

ABSTRACT: METHODS FOR IDENTIFYING, CONTAINING AND RECLAIMING CONTAMINATED GROUNDWATER ARE BEING DEVELOPED AND REFINED. SEVERAL METHODS ARE DESCRIBED. WHILE PROGRESS ON TECHNIQUES IS BEING MADE, COSTS REMAIN HIGH.

AVAILABILITY: ENVIRONMENTAL SCIENCE 8 TECHNOLOGY; V17 N8

IRIS ACCESSION NUMBER: EW009979

PUBLICATION DATE: SUM 83

TITLE: MONITORING SAMPLING PROTOCOL CONSIDERATIONS.

PERSONAL AUTHOR: NACHT, STEVE J.

DESCRIPTOR: *GROUNDWATER; *MONITORING; *RECOMMENDATIONS; *SAMPLING; *WATER QUALITY

DESCRIPTIVE NOTE: 23-29P.

ABSTRACT: SUGGESTIONS FOR SAMPLING GROUNDWATER ARE PROVIDED. INCLUDED ARE STATEMENTS ON FREQUENCY OF SAMPLING, WELL DIAMETER, SAMPLER CHARACTERISTICS, SAMPLING, AND SAMPLE PRESERVATION.

AVAILABILITY: GROUND WATER MONITORING REVIEW; V3 N3

IRIS ACCESSION NUMBER: EW009980

PUBLICATION DATE: SUM 83

TITLE: THE APPLICATION OF SURFACE ELECTRICAL AND SHALLOW GEOTHERMIC METHODS IN MONITORING NETWORK DESIGN.

PERSONAL AUTHOR: GILKESON, ROBERT H.; CARTWRIGHT, KEROS

DESCRIPTOR: *CASE HISTORIES; *CONTAMINATION; *EVALUATION; *GEOPHYSICAL METHODS; *GROUNDWATER; *MONITORING; *POLLUTION; *TEMPERATURE; *WASTE DISPOSAL; *WASTE DISPOSAL SITES; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 30-42P.

ABSTRACT: DESCRIBED ARE A NUMBER OF THE SURFACE GEOPHYSICAL METHODS THAT MAY PROVIDE A VALUABLE CONTRIBUTION TO THE MONITORING PROGRAM AT A WASTE DISPOSAL SITE.

AVAILABILITY: GROUND WATER MONITORING REVIEW; V3 N3

IRIS ACCESSION NUMBER: EW009981

PUBLICATION DATE: SUM 83

TITLE: MONITORING PRODUCTS BUYERS GUIDE.

DESCRIPTOR: *EQUIPMENT; *GROUNDWATER; *INSTRUMENTS; *MONITORING

DESCRIPTIVE NOTE: 43-57P.

ABSTRACT: THIS SECTION OF THE JOURNAL PROVIDES A BUYERS GUIDE TO MONITORING PRODUCTS. INCLUDED ARE SAMPLING DEVICES, MEASURING DEVICES, INSTRUMENTS, CORING DEVICES, FLOWMETERS, AND DRILLING MATERIALS.

AVAILABILITY: GROUND WATER MONITORING REVIEW: V3 N3

IRIS ACCESSION NUMBER: EW009982

PUBLICATION DATE: SUM 83

TITLE: A PROGRAM FOR REMOVING LOW LEVELS OF TRITIATED WATER FROM AN AQUIFER.

PERSONAL AUTHOR: STYRON, CLARENCE E.

DESCRIPTOR: AQUIFERS; *CONTAMINATION; *DRINKING WATER; *GROUNDWATER; INFILTRATION; *PUMPING; *OHIO; *TRITIUM; WATER RESOURCES; *WATER SUPPLY; *WATER TREATMENT; WELLS

DESCRIPTIVE NOTE: 61-66P.
ABSTRACT: DESCRIBED IS A PROGRAM OF HIGH-VOLUME PUMPING WITH INDUCED FILTRATION THAT BROUGHT AN AQUIFER INTO COMPLIANCE WITH THE U.S. EPA STANDARD FOR TRITIUM IN COMMUNITY DRINKING WATER SUPPLIES.

AVAILABILITY: GROUND WATER MONITORING REVIEW; V3 N3

IRIS ACCESSION NUMBER: EW009983

PUBLICATION DATE: AUG 83

TITLE: MANAGING WATER RESOURCES: LESSONS FOR THE U.S.

PERSONAL AUTHOR: CLEARY, EDWARD J.

DESCRIPTOR: *GERMANY; *FINANCING; *MANAGEMENT; *PUBLIC ROLE; *PRIVATE ROLE; *QUALITY CONTROL; *RUHR RIVER; *WASTEWATER TREATMENT; *WATER RESOURCES; *WATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 1034-1041P.

ABSTRACT: DESCRIBED IS THE WATER MANAGEMENT PROGRAM IN THE RUHR RIVER AREA. THE SELF-GOVERNING WATER MANAGEMENT ASSOCIATIONS ARE MODELS FOR THE RESPONSIBLE HANDLING OF A SCARCE RESOURCE. THE ASSOCIATIONS ARE PUBLIC-PRIVATE PARTNERSHIPS WITH A LONG HISTORY OF EFFECTIVE QUALITY CONTROL AND FAIR APPORTIONMENT OF COSTS FOR WASTEWATER TREATMENT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N8

IRIS ACCESSION NUMBER: EW009984

PUBLICATION DATE: AUG 83

TITLE: RURAL WASTEWATER PLANNING.

PERSONAL AUTHOR: WOLFSON, MARTIN M.

DESCRIPTOR: *FACILITIES; *FEDERAL ROLE; *MANAGEMENT; *NEW YORK; *OPERATIONS (WASTEWATER); *ONSITE WASTEWATER TREATMENT; *PLANNING; *PUBLIC HEALTH; *RURAL AREAS; *STATE ROLE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1042-1050P.

ABSTRACT: THE PRESENT WASTEWATER FACILITY PLANNING PROCESS MAY NOT BE A SUITABLE TOOL FOR SOLVING THE PROBLEMS OF SMALL OR RURAL COMMUNITIES. A CASE STUDY OF WILLMINGTON, N.Y. IS PRESENTED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N8

IRIS ACCESSION NUMBER: EW009985
PUBLICATION DATE: AUG 83

TITLE: MANAGEMENT TRAINING AS A TROUBLESHOOTING TOOL.

PERSONAL AUTHOR: PETERSON, W.; MANOLAKIS, G.

DESCRIPTOR: *MANAGEMENT; *OPERATIONS (WASTEWATER); *START-UP; *TRAINING; *TROUBLESHOOTING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1051-1056P.

ABSTRACT: A MANAGEMENT TRAINING PROGRAM MAY BE A SMALL FRACTION OF THE TOTAL START-UP OR TROUBLESHOOTING EFFORT, BUT ITS RESULTS ARE USUALLY SUBSTANTIAL. DESCRIBED ARE SEVERAL TYPES OF TROUBLESHOOTING PROGRAMS AND KEY ELEMENTS OF SUCCESSFUL PROGRAMS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N8

IRIS ACCESSION NUMBER: EW009986

PUBLICATION DATE: AUG 83

TITLE: FACTORS AFFECTING FINE BUBBLE DIFFUSED AERATION.

PERSONAL AUTHOR: HUIBREGTSE, GREGORY L.; AND OTHERS

DESCRIPTOR: *AERATION; *AERATION BASINS; *DESIGN; *ENERGY CONSERVATION; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1057-1064P.

ABSTRACT: WHEN SPACE REQUIREMENTS ARE NOT A MAJOR FACTOR, EXTREMELY DEEP AERATION BASINS PROVIDE NO ENERGY SAVINGS. BEST RESULTS WERE OBTAINED WITH A DUAL HEADER SYSTEM, LOW AIR FLOW RATE, AND INSTALLATION AT GREATER DEPTHS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N8

IRIS ACCESSION NUMBER: EW009987

PUBLICATION DATE: AUG 83

TITLE: AEROSOL RELEASE OF CYANOPHAGES AND COLIFORMS FROM ACTIVATED SLUDGE BASINS.

PERSONAL AUTHOR: CANNON, ROBERT E.

DESCRIPTOR: *ACTIVATED SLUDGE BASINS; *AEROSOLS; *COLIFORMS; *CYANOPHAGES; *CONTAMINATION; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1070-1074P.

ABSTRACT: MONITORING OF CYANOPHAGES CAN PROVIDE A RAPID AND

INEXPENSIVE MEASURE OF THE SPREAD OF VIRUSES BY AEROSOLS. A STUDY CONDUCTED AT TWO BUFFALO, N.Y. WASTEWATER FACILITIES INDICATED THAT WIND WAS THE MOST IMPORTANT ENVIRONMENTAL FACTOR REGARDING AEROSOL SPREAD OF CYANOPHAGES AND COLIFORMS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N8

IRIS ACCESSION NUMBER: EW009988

PUBLICATION DATE: AUG 83

TITLE: EFFECTS OF DISSOLVED OXYGEN AND MIXING ON ALGAL AUTOFLOTATION.

PERSONAL AUTHOR: ARBELAEZ, JAVIER; AND OTHERS

DESCRIPTOR: *AIR FLOTATION; *AUTOFLOTATION BASINS; *ALGAE; *ROTATION; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1075-1079P.

ABSTRACT: AUTOFLOTATION BASINS CAN BE DESIGNED TO OPERATE AT OVERFLOW RATES SIMILAR TO THOSE USED FOR DISSOLVED AIR FLOTATION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N8

IRIS ACCESSION NUMBER: EW009989

PUBLICATION DATE: AUG 83

TITLE: EFFECTS OF AMMONIA AND CHLORINE ON FISH IN STREAMS RECEIVING SECONDARY DISCHARGES.

PERSONAL AUTHOR: PALLER, MICHAEL H.; AND OTHERS

DESCRIPTOR: *AMMONIA; *AQUATIC LIFE; *CHLORINE; *EFFLUENT; *FISH; *ENVIRONMENTAL IMPACT; *ILLINOIS; *MONITORING; *RESEARCH REPORTS; *RESIDUAL CHLORINE; *SECONDARY DISCHARGES; *STREAMS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1087-1097P.

ABSTRACT: RESIDUAL CHLORINE IN WASTEWATER EFFLUENTS WAS IDENTIFIED AS THE MAIN TOXICANT SUPPRESSING THE DIVERSITY, SIZE, AND QUANTITY OF FISH IN TWO ILLINOIS STREAMS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N8

IRIS ACCESSION NUMBER: EW009990

PUBLICATION DATE: AUG 83

TITLE: STATISTICAL MODELS FOR WATER QUALITY REGULATION.

PERSONAL AUTHOR: LOFTIS, JIM C.; AND OTHERS

DESCRIPTOR: *MODELS; *MONITORING; *REGULATIONS; *SAMPLING; *STATISTICAL MODELS; *STATISTICS; *WATER QUALITY

DESCRIPTIVE NOTE: 1098-1104P.

ABSTRACT: THE APPLICATION OF BASIC STATISTICAL TOOLS CAN GREATLY ENHANCE THE ABILITY OF FIXED-STATION MONITORING TO PROVIDE THE NECESSARY DATA FOR PERMIT ENFORCEMENT. FOUR PROCEDURES FOR STUDYING WATER QUALITY ARE DISCUSSED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N8

IRIS ACCESSION NUMBER: EW009991

PUBLICATION DATE: AUG 83

TITLE: PHOSPHORUS FLUX RATES IN LAKE SEDIMENTS.

PERSONAL AUTHOR: MAWSON, SIMON; AND OTHERS

DESCRIPTOR: *LAKES; *PHOSPHORUS; *RESEARCH REPORTS; *SEDIMENTS; *WATER QUALITY
DESCRIPTIVE NOTE: 1105-1110P.

ABSTRACT: THE IMPACT OF PHOSPHORUS RELEASE FROM SEDIMENTS WAS FOUND TO DEPEND ON THE DISSOLVED OXYGEN CONCENTRATION AT THE SEDIMENT-WATER INTERFACE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N8

IRIS ACCESSION NUMBER: EW009992

PUBLICATION DATE: AUG 83

TITLE: EFFECT OF EFFLUENT DISINFECTION ON RISKS OF VIRAL DISEASE TRANSMISSION VIA RECREATIONAL WATER EXPOSURE.

PERSONAL AUTHOR: HAAS, CHARLES N.

DESCRIPTOR: *DISEASE; *DISINFECTION; *EFFLUENTS; *ILLINOIS; *REGULATIONS; *RECREATIONAL WATER; *RISK; *WATER QUALITY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1111-1116P.

ABSTRACT: PRECISE CALCULATIONS OF RISK REQUIRE DATA NOT USUALLY AVAILABLE, BUT SOME USEFUL RELATIVE APPROXIMATIONS CAN BE MADE. DATA INDICATE THAT CURRENT ILLINOIS REGULATIONS ON WASTEWATER DISCHARGE MAY RESULT IN SEVERAL THOUSAND

EXCESS CASES OF VIRAL DISEASE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N8

IRIS ACCESSION NUMBER: EW009993

PUBLICATION DATE: AUG 83

TITLE: REPLACE OR REHABILITATE DETERIORATING MANHOLES.

PERSONAL AUTHOR: HUNT, LARRY E.

DESCRIPTOR: *FACILITIES; *MAINTENANCE; *REHABILITATION; *MANHOLES; *SEWERS; *SULFIDES; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 54-55P.

ABSTRACT: PRECAST CONCRETE MANHOLES IN A LONG, FLAT INTERCEPTOR SUFFERED SULFIDE ATTACK. LINERS OF FIBERGLASS RESIN/SAND MORTAR WERE INSTALLED.

AVAILABILITY: PUBLIC WORKS; V114 N8

IRIS ACCESSION NUMBER: EW009994

PUBLICATION DATE: AUG 83

TITLE: PRODUCING DISINFECTANT ON-SITE IS EFFECTIVE AT WASTEWATER PLANT.

PERSONAL AUTHOR: DEMYAN, JOHN P.

DESCRIPTOR: *COSTS; *DISINFECTION; *EFFLUENTS; *FACILITIES; *OHIO; *ONSITE PRODUCTION; *OPERATIONS (WASTEWATER); *SODIUM HYPOCHLORITE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 56-57P.

ABSTRACT: AN ELECTROLYTIC SYSTEM PRODUCES SODIUM HYPOCHLORITE AT LESS THAN ONE-THIRD THE COST OF A COMMERCIAL SUPPLY.

AVAILABILITY: PUBLIC WORKS; V114 N8

IRIS ACCESSION NUMBER: EW009995

PUBLICATION DATE: AUG 83

TITLE: CHOOSING THE RIGHT APPROACH FOR COMPOST MARKETING.

PERSONAL AUTHOR: COX, RALPH E.; AND OTHERS

DESCRIPTOR: *CASE HISTORIES; *COMPOST; *COSTS; *MARKETING; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 67-94P.

ABSTRACT: TO BE SUCCESSFUL, A SEWAGE SLUDGE COMPOSTING OPERATION MUST HAVE A MARKET FOR THE PRODUCT. SEVERAL CASE HISTORIES ARE EXAMINED.

AVAILABILITY: PUBLIC WORKS; V114 N8

IRIS ACCESSION NUMBER: EW009996

PUBLICATION DATE: AUG 83

TITLE: THE USE OF PERSONAL COMPUTERS IN FILTER PLANT OPERATIONS.

PERSONAL AUTHOR: BARNHART, DALE R.

DESCRIPTOR: *CHEMICALS; *COMPUTERS; *COMPUTER APPLICATIONS; *FILTRATION; *MONITORING; *OPERATIONS (WATER); *RECORD KEEPING; *RECORDS; *WATER INVENTORY; *WATER TREATMENT

DESCRIPTIVE NOTE: 68-69P.

ABSTRACT: INITIALLY PURCHASED AS A MONITORING TOOL, THE COMPUTER HAS ALSO PROVIDED NUMEROUS RECORD-KEEPING BENEFITS.

AVAILABILITY: PUBLIC WORKS; V114 N8

IRIS ACCESSION NUMBER: EW009997

PUBLICATION DATE: AUG 83

TITLE: LOW HEAD HYDRO REDEVELOPMENT SERVES MUNICIPAL WATER TREATMENT PLANT.

PERSONAL AUTHOR: GANNETT, WAYNE

DESCRIPTOR: *ENERGY; *FACILITIES; *HYDROELECTRIC POWER; *ECONOMICS; *FUNDING; *MUNICIPAL GOVERNMENT; *OPERATIONS (WATER); *POWER GENERATION; *REHABILITATION; *WATER TREATMENT

DESCRIPTIVE NOTE: 76-79,107P.

ABSTRACT: THIS HYDROELECTRIC PLANT, ABANDONED SINCE 1971, IS BEING RECONSTRUCTED WITH LARGER TURBINES TO SUPPLY POWER FOR A WATER TREATMENT FACILITY.

AVAILABILITY: PUBLIC WORKS; V114 N8

IRIS ACCESSION NUMBER: EW009998

PUBLICATION DATE: AUG 83

TITLE: MANUFACTURING SOFTWARE - THE 6TH ANNUAL SURVEY OF SMALL-SYSTEM.

PERSONAL AUTHOR: ARNOLD, CHARLES; BOURKE, RICHARD

DESCRIPTOR: *ACCOUNTING; *COMPUTER SOFTWARE; *COMPUTER

PROGRAMS; *COST ACCOUNTING; *JOB CONTROL; *MANUFACTURERS; *ORDER ENTRY; *PLANNING; *PURCHASING; *VENDORS

DESCRIPTIVE NOTE: 27-28P.

ABSTRACT: THIS IS THE SIXTH ANNUAL SURVEY OF MANUFACTURING SOFTWARE PACKAGES OPERATING ON SMALLER COMPUTER SYSTEMS. INCLUDED IS INFORMATION ON PRODUCTS, FUNCTIONS OF SOFTWARE, PRICES, COMPANY NAMES OF VENDORS, AND SYSTEMS ON WHICH THE SOFTWARE OPERATES.

AVAILABILITY: SMALL SYSTEMS WORLD; V11 N8

IRIS ACCESSION NUMBER: EW010007

PUBLICATION DATE: JUN 83

TITLE: GUIDE TO METERING PUMPS.

DESCRIPTOR: *EQUIPMENT; *GUIDES; *METERING PUMPS; *PUMP DESCRIPTIONS; *PUMPS; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: R9-R16P.

ABSTRACT: THIS GUIDE TO METERING PUMPS IS INTENDED TO FAMILIARIZE THE USER WITH CHEMICAL METERING PUMPS. THE MOST COMMON MAJOR SUB-ASSEMBLIES OF PUMPS ARE COVERED SEPARATELY. THE TYPES OF PUMP HEAD ASSEMBLIES AND DRIVE ASSEMBLIES DISCUESED ARE USED BY VARIOUS MANUFACTURERS IN DIFFERENT COMBINATIONS AND CONFIGURATIONS.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT REFERENCE HANDBOOK 83; V130 N8

IRIS ACCESSION NUMBER: EW010008

PUBLICATION DATE: JUN 83

TITLE: TABLES FOR FLUID FLOW AND RESISTANCE AND ASTM CONCRETE PIPE STANDARDS.

DESCRIPTOR: *CHARTS; *FLUID FLOW; *FLUMES; *FRICTION; *PIPE FLOW; *PIPES; *PIPE STANDARDS; *STANDARDS; *TABLES; *VALVES; *WEIRS

DESCRIPTIVE NOTE: R20-R42P.

ABSTRACT: LISTED ARE RESISTANCE OF VALVES AND FITTINGS TO FLUID FLOW, MANNING FORMULA, PIPE FLOW CHARTS, PIPE FRICTION LOSS FROM LAMINAR FLOW, A CALCULATOR PROGRAM FOR FLOW IN DUCTILE IRON PIPE, CAPACITY TABLES FOR WEIRS AND FLUMES, AND ASTM CONCRETE PIPE STANDARDS.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT REFERENCE HANDBOOK 83; V130 N8

IRIS ACCESSION NUMBER: EW010009

PUBLICATION DATE: JUN 83

TITLE: GAS FEEDERS, MIXERS, AND CHEMICALS FOR WATER TREATMENT.

DESCRIPTOR: *CHEMICALS; *CHEMICAL PREPARATION; *EQUIPMENT; *FLOCCULATION; *GAS FEEDERS; *OPERATIONS (WATER); *OPERATIONS (WASTEWATER); *MIXERS; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: R42-R53P.

ABSTRACT: THIS ARTICLE PRESENTS HYDRAULIC CONSIDERATIONS IN GAS FEEDER INSTALLLATIONS, MOTIONLESS MIXERS AND FLOCCULATION, AND PREPARING AND FEEDING CHEMICALS FOR WATER TREATMENT.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT REFERENCE HANDBOOK 83; V130 N8

IRIS ACCESSION NUMBER: EW010010

PUBLICATION DATE: JUN 83

TITLE: CHLORINATION SIZING GUIDE AND CHLORINE CONTAINERS.

DESCRIPTOR: *CHLORINE; *CHLORINATION DOSAGES; *DISINFECTION; *CHLORINE CONTAINERS; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: R54-R57P.

ABSTRACT: PRESENTED IS INFORMATION ON CHLORINATION DOSAGES FOR WATER AND WASTEWATER IN PARTS PER MILLION AND GENERAL INFORMATION REGARDING CHLORINE CONTAINERS.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT REFERENCE HANDBOOK 83; V130 N8

IRIS ACCESSION NUMBER: EW010011

PUBLICATION DATE: JUN 83

TITLE: COMMONLY USED WATER TREATMENT INFORMATION.

DESCRIPTOR: *CHEMICALS; *COMPOSITION; *DENSITY; *MOLECULAR WEIGHT; *SOLUBILITY; *WATER TREATMENT

DESCRIPTIVE NOTE: R58P.

ABSTRACT: PRESENTED IS A TABLE OF PROPERTIES OF CHEMICALS COMMONLY USED IN WATER TREATMENT. DATA INCLUDE MOLECULAR WEIGHT, DENSITY, SOLUBILITY, PH OF A 1% SOLUTION, AND COMPOSITION OF COMMERCIAL PRODUCTS.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT REFERENCE HANDBOOK 83; V130 N8

IRIS ACCESSION NUMBER: EW010018
PUBLICATION DATE: 82

TITLE: ACTIVATED FIXED FILM BIOSYSTEMS IN WASTEWATER TREATMENT.

PERSONAL AUTHOR: SMITH, JOHN W.; KHARARJIAN, HRAJ A.

DESCRIPTOR: *ACTIVATED BIOLOGICAL CONTACTORS; *CONFERENCE PROCEEDINGS; ENERGY; *FACILITIES; OXYGEN; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 17P. PRICE CODE: PC A02/MF A01. AD-P000 780/7.

ABSTRACT: THE RESULTS TO DATE, BOTH LABORATORY AND FIELD PILOT PLANT, INDICATE THAT THE ACTIVATED BIOLOGICAL CONTACTOR (ABC) CONCEPT OFFERS SEVERAL ADVANTAGES OVER FLUID BED SYSTEMS IN WASTEWATER TREATMENT. CONSIDERABLE ENERGY SAVINGS APPEAR POSSIBLE DUE TO THE LOWER OXYGEN UPTAKE RATE OF THE BIOMASS. ALTHOUGH THE OXYGEN UPTAKE RATE OF THE ABF TOWER BOTTOMS WAS RELATIVELY HIGH (ABOUT 200 MG/1/HR.), THE RATE IN THE AERATION BASIN FOLLOWING THE TOWER WAS LESS THAN 50 MGL/HR. ALL OF THE REACTORS (CONTACTORS AND AERATION BASIN) IN THE LABORATORY STUDY EXHIBIT UPTAKE RATES LESS THAN 50 MG/1/HR.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010019

PUBLICATION DATE: APR 82

TITLE: AIR FORCE EXPERIENCE IN FIXED-FILM BIOLOGICAL PROCESSES.

PERSONAL AUTHOR: HUANG, CHING-SAN

DESCRIPTOR: *CONTACT AERATION PROCESS; *CONFERENCE PROCEEDINGS; *FACILITIES; *FIXED FILM BIOLOGICAL PROCESSES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; TRICKLING FILTERS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 29P. PRICE CODE: PC A03/MF A01. AD-P000 806/0.

ABSTRACT: SOME 30 FIXED-FILM BIOLOGICAL WASTEWATER TREATMENT PLANTS ARE LOCATED ON AIR FORCE INSTALLATIONS. MOST OF THE FIXED-FILM PROCESS PLANTS ARE TRICKLING FILTER SYSTEM, EXCEPT ONE WITH THE CONTACT AERATION PROCESS AND TWO WITH THE ROTATING BIOLOGICAL CONTACTOR (RBC) PROCESS. THIS PAPER WILL DISCUSS THE AIR FORCE EXPERIENCE IN UPGRADING THE CONTACT AERATION PROCESS PLANT WITH PLASTIC MEDIA; THE APPLICATION OF TRICKLING FILTER TO PHENOLIC WASTEWATER TREATMENT PLANT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010020
PUBLICATION DATE: 82

TITLE: ANAEROBIC BIOFILTRATION - PROCESS MODIFICATION AND SYSTEM DESIGN.

PERSONAL AUTHOR: OLESZKIEWICZ, JAN A.; OLTHOF, MEINT

DESCRIPTOR: *ANAEROBIC FIXED FILM REACTORS; *ANAEROBIC BIOFILTRATION; *BIOFILTRATION; *CONFERENCE PROCEEDINGS; *DESIGN; *FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 23P. PRICE CODE: PC A02/MF A01. AD-P000 799/7.

ABSTRACT: ADVANTAGES OF ANAEROBIC FIXED FILM REACTORS OVER OTHER BIOLOGICAL TREATMENT UNITS ARE: (1) NO LIMITS SET ON INFLUENT SOLUBLE ORGANICS CONCENTRATION; (2) NO LIMITS SET ON ORGANIC LOADS APPLIED; (3) THE LOWEST SLUDGE (BIOMASS) YIELD OF ALL AVAILABLE BIOREACTORS; (4) THE LOWEST N&P REQUIREMENTS; (5) THE AVAILABILITY OF OPTIONAL OPERATION IN PLUG-FLOW AND COMPLETELY MIXED MODE THROUGH RECYCLE; (6) THE LOWEST LEVEL OF ATTENTION REQUIRED AND ASSOCIATED LOW OPERATING COSTS; (7) FEASIBILITY OF SEASONAL, 5 DAYS/WEEK OR OTHERWISE INTERMITTENT OPERATION; (8) HIGHEST RESISTANCE TO TOXIC AND INHIBITORY COMPOUNDS; (9) LOW AREA (REAL ESTATE) REQUIREMENTS; (10) ODORLESS OPERATION; (11) GENERATION OF HIGH CH4-CONCENTRATION (ABOVE 70%) GAS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010021

PUBLICATION DATE: 82

TITLE: APPLICATION OF ROTARY SCREENS, BIOLOGICAL CONTACTORS, AND GRAVITY PLATE SETTLERS TO TREAT WASTEWATERS IN HOBOKEN AND NORTH BERGEN,

PERSONAL AUTHOR: LYNCH, JOSEPH M.; AND OTHERS

DESCRIPTOR: *BIOLOGICAL CONTACTORS; *CONFERENCE PROCEEDINGS; *EQUIPMENT; *GRAVITY PLATE SETTLERS; *NEW JERSEY; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *ROTOSCREENS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 39P. PRICE CODE: PC A03/MF A01. AD-P000 756/7.

ABSTRACT: THE HOBOKEN PILOT PLANT WAS OPERATED ON A FULL-SCALE FACILITY BY USING ROTOSCREENS FOR PRIMARY TREATMENT. ROTATING BIOLOGICAL CONTACTORS OR TRICKLING FILTER FOR CARBONACEOUS REMOVAL, AND LAMELLA GRAVITY SETTLER FOR BIOLOGICAL SOLID AND LIQUID SEPARATION. THE RESULTS SHOWED THIS FLOW THROUGH SYSTEM CAN SUCCESSFULLY TREAT SEWAGE AT THE EFFLUENT CONCENTRATION OF BOTH BOD AND SUSPENDED SOLIDS LESS THAN 20 MG/1. THE BIOMASS SLOUGHED FROM THE MEDIA OF ROTATING BIOLOGICAL CONTACTOR OR TRICKLING FILTER INTO THE MIXED LIQUOR, WERE EASILY SETTLED DOWN ON THE LAMELLA

GRAVITY SETTLER WITHOUT CAUSING ANY PROBLEM ON THE SETTLER, SUCH AS BIOLOGICAL GROWTH ON THE PLATER OF THE SETTLER. IN STAGE ANALYSIS, THE OPERATION OF THE ROTATING BIOLGGICAL CONTACTOR AT TWO STAGES SHOWED THE BEST RESULTS, EITHER IN THE BOD REMOVAL EFFICIENCY OF SLUDGE PRODUCTION, WHILE COMPARING WITH 3, 4 OR 5 STAGES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010022

PUBLICATION DATE: 82

TITLE: APPLICATION OF ROTATING BIOLOGICAL CONTACTOR (RBC) PROCESS FOR TREATMENT OF WASTEWATER CONTAINING A FIREFIGHTING AGENT (AFFF) AQUEO

PERSONAL AUTHOR: LANDON-ARNOLD, SUSAN; CHAN, DEH BIN

DESCRIPTOR: *BIOLOGICAL CONTACTORS; *AFFF; *AQUEOUS FILM FORMING FOAM; *CONFERENCE PROCEEDINGS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *ROTATING BIOLOGICAL CONTACTORS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 17P. PRICE CODE: PC A02/MF A01. AD-P000 767/4.

ABSTRACT: THE PURPOSE OF THIS RESEARCH WAS TO DETERMINE THE FEASIBILITY OF TREATING WASTEWATER CONTAINING AQUEOUS FILM FORMING FOAM (FC-780) BY AN AEROBIC RBC. THE PRELIMINARY DATA PRESENTED HERE DEMONSTRATES THAT FC-780 IS CONDUCIVE TO AEROBIC BIO-CONVERSION AND REMOVAL WITH A PROPERLY ADAPTED RBC UNIT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010623

PUBLICATION DATE: 82

TITLE: APPLICATION OF STANDARD RATE AND HIGH RATE ANAEROBIC TREATMENT PROCESSES.

PERSONAL AUTHOR: OWEN, WILLIAM F.

DESCRIPTOR: *ANAEROBIC PROCESSES; *COMPARATIVE ANALYSIS; *CONFERENCE PROCEEDINGS; *ENERGY; *FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 40P. PRICE CODE: PC A03/MF A01. AD-P000 787/2.

ABSTRACT: THE VARIOUS ANAEROBIC PROCESSES HAVE SPECIFIC ADVANTAGES AND DISADVANTAGES ASSOCIATED WITH EACH. IT IS INSTRUCTIVE TO COMPARE TYPICAL ORGANIC LOADING RANGES OF ANAEROBIC PROCESSES WITH RESPECT TO CONVENTIONAL AEROBIC TREATMENT TO GAIN A PERSPECTIVE ON THESE APPLICATIONS. TYPICAL LOADINGS OF SEVERAL COMMON BIOLOGICAL PROCESSES ARE

COMPARED WHERE ALL SYSTEMS ARE DESIGNED FOR 70 TO 95 PERCENT REMOVAL OF BIODEGRADABLE ORGANICS. WHEN PROPERLY APPLIED, ALL ANAEROBIC PROCESSES HAVE THE POTENTIAL TO BE NET PRODUCERS OF ENERGY, AS OPPOSED TO ALTERNATIVE STABILIZATION PROCESSES, WHICH ARE ESSENTIALLY ALL NET CONSUMERS OF ENERGY. ANAEROBIC CONTACT AND CONVENTIONAL ANAEROBIC PROCESSES ARE FAVORABLE FOR HIGH-STRENGTH WASTES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010024

PUBLICATION DATE: APR 83

TITLE: BIOINDICATORS OF POLLUTION. NOVEMBER, 1977-APRIL 1983. (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *AIR POLLUTION; *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *BIOINDICATORS; *MONITORING; *POLLUTION; *RESEARCH REPORTS; *WATER POLLUTION; *WATER QUALITY

DESCRIPTIVE NOTE: 213P. PRICE CODE: PC N01/MF N01. PB83-805341.

ABSTRACT: THIS VOLUME CITES ABSTRACTS RELATING TO THE USE OF MICROORGANISMS, ANIMALS, PLANTS, AND FISHES TO DETECT AIR AND WATER POLLUTION. SOME OF THE ORGANISMS DISCUSSED ARE ALGAE, BACTERIA, AQUATIC PLANTS, OYSTERS, SNAILS, CLAMS, INSECTS, ANNELIDA, AMPHIBIANS, BEAVER AND FUNGI. (THIS UPDATED BIBLIOGRAPHY CONTAINS 214 CITATIONS, 19 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010025

PUBLICATION DATE: 82

TITLE: COMPARISON OF FIXED-FILM REACTORS WITH A MODIFIED SLUDGE BLANKET REACTOR.

PERSONAL AUTHOR: BACHMANN, ANDRE; AND OTHERS

DESCRIPTOR: *ANAEROBIC SLUDGE BLANKET PROCESS; *COMPARATIVE ANALYSIS; *FIXED FILM REACTORS; *FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 20P. PRICE CODE: PC A02/MF A01. AD-P000 781/5.

ABSTRACT: AN ANAEROBIC SLUDGE BLANKET PROCESS, TERMED THE BAFFLED REACTOR, HAS BEEN DEVELOPED WHICH SHOWS EXCELLENT PROMISE FOR INDUSTRIAL WASTEWATER TREATMENT. IT COMBINES THE ADVANTAGES OF THE ANAEROBIC FILTER (3), WHICH HAS A HIGH STABILITY AND RELIABILITY DUE TO ATTACHMENT OF THE BIOLOGICAL SOLIDS ONTO AND BETWEEN THE FILTER MEDIA, AND THE UPLOW ANAEROBIC SLUDGE PROCESS (5) IN WHICH THE MICROBIAL

MASS ITSELF FUNCTIONS AS THE SUPPORT MEDIUM FOR ORGANISM ATTACHMENT, LEADING TO A HIGH VOID VOLUME. THE BAFFLED REACTOR'S CONSTRUCTION, HOWEVER, AVOIDS CERTAIN SIGNIFICANT LIMITATIONS OF THESE OTHER REACTORS. SPECIFICALLY, THE RISK OF CLOGGING AND THE RISK OF SLUDGE BED MINIMIZED. THE BAFFLED REACTOR MAINTAINS A HIGH VOID VOLUME WITHOUT THE NEED OF EXPENSIVE AND OPERATIONALLY WORK INTENSIVE GAS COLLECTION SYSTEMS OR SLUDGE SEPARATION SYSTEMS. THE OVER AND UNDER LIQUID FLOW REDUCES BACTERIAL WASHOUT CONSIDERABLY, AND DOES NOT REQUIRE UNUSUAL SETTLING PROPERTIES FOR THE MICROBIAL CULTURE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010026

PUBLICATION DATE: 82

TITLE: DEVELOPMENT OF SYNTHETIC MEDIA FOR BIOLOGICAL TREATMENT OF MUNICIPAL AND INDUSTRIAL WASTEWATERS.

PERSONAL AUTHOR: BRYAN, EDWARD H.

DESCRIPTOR: *BIOLOGICAL TREATMENT; *CONFERENCE PROCEEDINGS; *FACILITIES; *EQUIPMENT; *INDUSTRIAL WASTES; *MUNICIPAL WASTES; *OPERATIONS (WASTEWATER); *PLASTIC MEDIA; *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 43P. PRICE CODE: PC A03/MF A01. AD-P000 733/6.

ABSTRACT: THIS PAPER PRESENTS ASPECTS OF THE CRITICAL EARLY STAGES IN THE DEVELOPMENT OF PLASTIC MEDIA, EXPERIENCES WITH RELEVANCE AND POTENTIAL APPLICABILITY TO CURRENT IMPLEMENTATION OF INNOVATIVE AND ALTERNATIVE SOLUTIONS TO PROBLEMS OF WASTEWATER TREATMENT AND MANAGEMENT. PREVIOUSLY UNPUBLISHED RESULTS FROM OPERATION OF SEVERAL EXPERIMENTAL UNITS DURING THE PERIOD FROM 1954 THROUGH 1958 ARE PRESENTED. INCLUDED ARE DATA AND RESULTS FROM UNITS THAT WERE PACKED TO DEPTHS OF 42 FEET AND WHICH WERE CONSTRUCTED TO MAKE INTERMEDIATE DEPTH-SAMPLING POSSIBLE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010027

PUBLICATION DATE: MAR 83

TITLE: EPA (ENVIRONMENTAL PROTECTION AGENCY) REGION VIII GUIDE TO THE DEVELOPMENT OF AN INDUSTRIAL PRETREATMENT PROGRAM: THE RAPID CITY.

DESCRIPTOR: *EPA; *GUIDES; *INDUSTRIAL PRETREATMENT; *PROGRAM DESCRIPTIONS; *PROGRAM DEVELOPMENT; *SOUTH DAKOTA; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 212P. PRICE CODE: PC A10/MF A10. PB83-192856.

ABSTRACT: THIS DOCUMENT PRESENTS A SIMPLIFIED APPROACH TO A PUBLICLY OWNED TREATMENT WORK'S (POTWS) DEVELOPMENT OF AN INDUSTRIAL PRETREATMENT PROGRAM WITHIN THE REQUIREMENTS OF THE GENERAL PRETREATMENT PROGRAM REGULATIONS AT 40 CFR 403. THE DOCUMENT ALSO INCLUDES AN EXAMPLE OF AN ACTUAL PROGRAM DEVELOPED FOR THE CITY OF RAPID CITY, SOUTH DAKOTA.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010028

PUBLICATION DATE: 82

TITLE: EVALUATION OF A BIOLOGICAL TOWER FOR TREATING AQUACULTURE WASTEWATER FOR REUSE.

PERSONAL AUTHOR: Rogers, Gary L.; Klemetson, Stanley L.

DESCRIPTOR: *AQUACULTURE WASTEWATER; *BIOLOGICAL TOWERS; *CONFERENCE PROCEEDINGS; *DESIGN; *FACILITIES; *RECYCLING; *REUSE; *WASTEWATER TREATMENT; *WATER REUSE

DESCRIPTIVE NOTE: 22P. PRICE CODE: PC A02/MF A01. AD-P000 774/0.

ABSTRACT: THE DESIGN AND SIZING OF BIOFILTERS FOR APPLICATION TO AQUACULTURE IS MORE OF AN ART THAN A SCIENCE. IF FACILITIES ARE TO BE DEVELOPED FOR INTENSIFICATION OF FISH CULTURE, A GREAT DEAL OF RESEARCH NEEDS TO BE DONE. DESIGN CRITERIA ARE AVAILABLE FOR FACILITIES THAT REAR COLD-WATER FISH AND INVERTEBRATES BUT IS LIMITED TO WATER TEMPERATURES UP TO 15 C. SINCE OPERATING TEMPERATURES ARE HIGH (27 TO 30 C), ORGANIC LOADINGS ARE SMALL, AND FLOWRATES ARE HIGH, STANDARD DESIGN TABLES ARE NOT ADEQUATE. TO COMPLICATE MATTERS MORE, THE ACTUAL WASTE PRODUCTION RATES FOR THE LIVE AQUACULTURE SYSTEMS ARE VARIABLE AND ILL-DEFINED. OPTIMIZATION OF DESIGN WILL REQUIRE THE CONTINUED EVALUATION OF EQUIPMENT AND PROCESSES UNDER A VARIETY OF CONDITIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010029

PUBLICATION DATE: 82

TITLE: EVALUATION OF AN ANAEROBIC ROTATING BIOLOGICAL CONTACTOR SYSTEM FOR TREATMENT OF A MUNITION WASTEWATER CONTAINING ORGANIC AND INORGANIC NITRATES.

PERSONAL AUTHOR: SMITH, LEONARD L.

DESCRIPTOR: *ANAEROBIC TREATMENT; *FACILITIES; *CONFERENCE PROCEEDINGS; *DESIGN; *INDUSTRIAL WASTES; *MUNITIONS; *NITRATES; *OPERATIONS (WASTEWATER); *ROTATING BIOLOGICAL CONTACTORS; *WASTEWATER TREATMENTS

DESCRIPTIVE NOTE: 14P. PRICE CODE: PC A02/MF A02. AD-

P000 766/6.

ABSTRACT: RADFORD ARMY AMMUNITION PLANT (RAAP), LIKE MOST OF THE ARMY PROPELLANT AND EXPLOSIVE MANUFACTURING PLANTS, WAS BUILT IN THE EARLY 1940S TO SUPPLY MUNITIONS FOR WORLD WAR II. IN 1970, THE ARMY INITIATED MODERNIZATION PROGRAMS AT ITS AMMUNITION PLANTS TO REPLACE OBSOLETE FACILITIES AND IMPROVE THE SAFETY OF OPERATIONS. AS PART OF THIS MODERNIZATION PROGRAM A CONTINUOUS AUTOMATED MULTI-BASE LINE (CAMBL) MANUFACTURING FACILITY WAS PLANNED FOR CONSTRUCTION AT RAAP TO AUGMENT THE PRESENT LABOR INTENSIVE BATCH PROCESS. THIS PAPER DESCRIBES THE STUDIES THAT WERE CONDUCTED TO DEVELOP DESIGN CRITERIA FOR A FACILITY TO TREAT THE WASTEWATERS THAT WILL BE GENERATED IN THE CAMBL.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010030

PUBLICATION DATE: 82

TITLE: EVALUATION OF RBC (ROTATING BIOLOGICAL CONTACTOR) SCALE-UP.

PERSONAL AUTHOR: WU, YEUN C.; AND OTHERS

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *DESIGN; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *ROTATING BIOLOGICAL CONTACTORS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 13P. PRICE CODE: PC A02/MF A01. AD-P000 747/6.

ABSTRACT: ACCORDING TO THIS INVESTIGATION, WHEN A FULL-SCALE RBC PLANT DESIGN IS BASED ON THE ESSENTIAL CONTROLLING VARIABLES OF INFLUENT SOLUBLE BOD CONCENTRATION, WASTEWATER TEMPERATURE, NUMBER OF DISC STAGES, SURFACE HYDRAULIC LOADING, AND % BOD REMOVAL REQUIREMENT, THE PRELIMINARY DESIGN CRITERIA DEVELOPED FROM PILOT PLANT STUDY CANNOT BE DIRECTLY EMPLOYED FOR DESIGN. A SCALE-UP FACTOR SHOULD BE USED. THIS FACTOR WAS SUCCESSFULLY DETERMINED BY THE MODEL PROPOSED BY WU ET AL. ITS RELATION TO WASTEWATER TEMPERATURE WAS MATHEMATICALLY FORMULATED BY CONDUCTING NON-LINEAR LEAST SQUARES REGRESSION ANALYSIS ON BOTH FULL-SCALE AND PILOT-SCALE DATA PREVIOUSLY REPORTED BY OTHER INVESTIGATORS. IT IS APPARENT THAT THE PROCESS SCALE-UP INCREASES FROM 1.067 AT T=3 C TO 1.227 AT T=25 C. HOWEVER, A DECREASE IN THE SCALE-UP FACTOR WAS FOUND WHEN THE TEMPERATURE EXCEEDED 25 C. THIS STUDY SHOWS THE EFFECT OF PROCESS SCALE-UP ON THE SELECTION OF HYDRAULIC LOADING FOR FULL-SCALE DESIGN IS SIGNIFICANT WHEN THE WASTEWATER TEMPERATURE AND HYDRAULIC LOADING DETERMINED DURING THE PILOT STUDY ARE HIGH.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010031
PUBLICATION DATE: 82

TITLE: FUTURE OF BIOLOGICAL FIXED-FILM PROCESSES AND THEIR APPLICATION TO ENVIRONMENTAL PROBLEMS.

PERSONAL AUTHOR: KLEMETSON, STANLEY L.; ROGERS, GARY L.

DESCRIPTOR: *BIOLOGICAL TREATMENT; *CONFERENCE PROCEEDINGS; *ENVIRONMENTAL IMPACTS; *FIXED FILM PROCESSES; *INDUSTRIAL WASTES; *MUNICIPAL WASTES; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 9P. PRICE CODE: PC A02/MF A01. AD-P000735/1.

ABSTRACT: THE NEEDS AND DESIGN OF MUNICIPAL AND INDUSTRIAL WASTEWATER TREATMENT FACILITIES WILL BE MUCH DIFFERENT IN THE LATE 1980'S THAN IN THE PAST. TO APPRECIATE THE CHANGES THAT WILL OCCUR IT IS NECESSARY TO REVIEW THE PAST. IN BOTH THE UNITED STATES AND BRITAIN THE DEVELOPMENT OF BIOLOGICAL TREATMENT PROGRESSED FROM SEWAGE FARMS AND DISCHARGE INTO WATERWAYS, THROUGH INTERMITTENT SAND FILTERS AND CONTACT BEDS, TO TRICKLING FILTERS, ACTIVATED SLUDGE BASINS, ROTATING BIOLOGICAL CONTACTORS, AND LAND APPLICATIONS. THE TERM BIOLOGICAL FIXED-FILM PROCESS IS REALLY A NEW NAME FOR AN OLD PROCESS. AS WILL SOON BE SHOWN WE HAVE GONE FULL CIRCLE AND ARE RETURNING THE SEMI-PASSIVE FIXED-FILM SYSTEMS. BIOLOGICAL FIXED-FILM PROCESSES HAVE BEEN AROUND FOR A LONG TIME. WHILE MANY OF THEM HAVE BEEN PLACED ON THE SHELF FOR MANY YEARS, THEIR USEFULNESS IS BEING REESTABLISHED, AND THEY ARE BEING USED AGAIN AS A VIABLE METHOD OF WASTEWATER TREATMENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010032

PUBLICATION DATE: MAY 83

TITLE: GROUNDWATER POLLUTION MONITORING. 1976-MAY, 1983 (CITATIONS FROM THE ENERGY DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *GROUNDWATER; *MONITORING; *POLLUTION; *REGULATIONS; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER POLLUTION CONTROL; *WATER QUALITY

DESCRIPTIVE NOTE: 137P. PRICE CODE: PC N01/MF N01. PB83-864470.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE MONITORING OF VARIOUS GROUNDWATER POLLUTANTS. TOPICS INCLUDE WASTEWATER TREATMENT, WATER POLLUTION SOURCES AND CONTROL, WATER QUALITY STANDARDS, AND GROUNDWATER MOVEMENT. MONITORING METHODS, CONTAMINATION MIGRATION, AND POLLUTION REGULATIONS ARE DISCUSSED. (CONTAINS 98 CITATIONS FULLY INDEXED AND INCLUDING A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285

PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010033

PUBLICATION DATE: OCT 80

TITLE: GUIDANCE PACKAGES FOR DEVELOPING EPA (ENVIRONMENTAL PROTECTION AGENCY) USER CHARGE SYSTEMS AND INDUSTRIAL COST RECOVERY SYSTEMS FOR SMALL COMMUNITIES UTILIZING THE CITY OF LOGANVILLE AS AN EXAMPLE.

PERSONAL AUTHOR: RIALL, B. WILLIAM, JR.

DESCRIPTOR: *CASE STUDIES; *GUIDELINES; *INDUSTRIAL COST RECOVERY; *INDUSTRIAL WASTES; *RATES; *USER CHARGES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 136P. PRICE CODE: PC A07/MF A01. PB83-195677.

ABSTRACT: FOUR REPORTS CONCERNING THE DEVELOPMENT OF USER CHARGE AND INDUSTRIAL COST RECOVERY SYSTEMS FOR SMALL COMMUNITIES ARE PRESENTED. THE FIRST EXPLAINS THE REQUIREMENTS THAT LOGANVILLE, GEORGIA HAD TO MEET TO CHARGE USERS FOR THE ENVIRONMENTAL PROTECTION AGENCY'S (EPA)-SUPPORTED WASTEWATER TREATMENT PLANT. AN EXAMPLE OF A FIRST YEAR RATE CALCULATION FOR A USER CHARGE SYSTEM IS PROVIDED AS IS THE TEXT OF THE ORDINANCE IMPLEMENTING THE USER CHARGE SYSTEM. THE SECOND REPORT DEALS WITH THE INDUSTRIAL COST RECOVERY (ICR) SYSTEM FOR LOGANVILLE AND INCLUDES THE TEXT OF THE ORDINANCE IMPLEMENTING THAT SYSTEM. THE THIRD REPORT DESCRIBES THE REQUIREMENTS THAT SMALL MUNICIPALITIES MUST MEET TO DEVELOP EPA USER CHARGE SYSTEMS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010034

PUBLICATION DATE: FEB 83

TITLE: IMPROVING DESIGN OF A DOMESTIC WASTE DISPOSAL SYSTEM USING AN UNSATURATED FLOW MODEL AND PHOSPHORUS ADSORPTION.

PERSONAL AUTHOR: BRUTSAERT, WILLEM F.; AND OTHERS

DESCRIPTOR: *DESIGN; *DOMESTIC WASTES; *OPERATIONS (WASTEWATER); *SEPTIC TANKS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 71P. PRICE CODE: PC A04/MF A01. PB83-196527.

ABSTRACT: A TWO-DIMENSIONAL UNSATURATED FLOW MODEL INCLUDING HYSTERESIS WAS DEVELOPED TO STUDY MOVEMENT AND DISTRIBUTION OF DOMESTIC SEPTIC TANK EFFLUENT IN A MOUND SYSTEM. THE OBJECTIVE WAS TO IMPROVE DESIGN BY MAXIMIZING PHOSPHORUS ADSORPTION. SIMULATION RUNS OF THIS STUDY, THEREFORE, FOCUSED ON THE MAXIMIZATION OF EFFLUENT SPREADING FOR GIVEN MOUND DIMENSIONS, THEREBY MINIMIZING SATURATION BENEATH THE TRENCH.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010035

PUBLICATION DATE: 82

TITLE: IN DEPTH COMPLIANCE AND PERFORMANCE ANALYSIS OF THE RBC (ROTATING BIOLOGICAL CONTACTOR) PROCESS AT MUNICIPAL SEWAGE TREATMENT PLANTS IN THE UNITED STATES.

PERSONAL AUTHOR: HYNEK, ROBERT J.; SULLIVAN, RICHARD A.

DESCRIPTOR: *BIOLOGICAL CONTACTORS; *COMPARATIVE ANALYSIS; *EFFLUENTS; *FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *VIOLATIONS; *WASTEWATER TREATMENT; *ROTATING BIOLOGICAL CONTACTORS

DESCRIPTIVE NOTE: 11P. PRICE CODE: PC A02/MF A01. AD-P000 757/5.

ABSTRACT: A COMPARATIVE ANALYSIS INDICATES THAT RBC FACILITIES PERFORMED SIGNIFICANTLY BETTER THAN FACILITIES EVALUATED BY THE G.A.O. CONFORMANCE WAS BETTER IN TERMS OF BOTH NON-SERIOUS AND SERIOUS VIOLATION CATEGORIES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010036

PUBLICATION DATE: 82

TITLE: MODELING OF BIOLOGICAL FIXED FILMS - A STATE-OF-THE-ART REVIEW.

PERSONAL AUTHOR: GRADY, C. P. LESLIE, JR.

DESCRIPTOR: *BIOLOGICAL FIXED FILMS; *FIXED-FILM REACTORS; *LITERATURE REVIEWS; *OPERATIONS (WASTEWATER); *STATE-OF-THE-ART REVIEWS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 61P. PRICE CODE: PC A04/MF A01. AD-P000 743/5.

ABSTRACT: CONCURRENTLY WITH THE NEW DEVELOPMENTS IN FIXED-FILM REACTORS HAS COME A RENEWED INTEREST IN THEIR MODELING. MATHEMATICAL MODELS MAY BE DIVIDED INTO TWO CATEGORIES: EMPIRICAL AND MECHANISTIC. IT IS CLEAR THAT WE HAVE NOT YET ACHIEVED A COMPLETE AND GENERAL MECHANISTIC MODEL FOR BIOFILMS WHICH CAN BE USED TO SIMULATE THE PERFORMANCE OF A BROAD RANGE OF FIXED-FILM PROCESSES. IT SHOULD BE RECALLED, HOWEVER, THAT A MAJOR GOAL OF MECHANISTIC MODELING IS TO INCREASE UNDERSTANDING. THE FACT THAT THE LARGE NUMBER OF EVENTS OCCURRING WITHIN BIOFILMS IS NOW WIDELY RECOGNIZED IS EVIDENCE FOR THE ATTAINMENT OF THAT GOAL. COMPARED TO THE SITUATION WHICH EXISTED TWENTY YEARS AGO A GREAT DEAL OF KNOWLEDGE HAS BEEN OBTAINED AND A GREAT DEAL OF PROGRESS HAS BEEN MADE. TODAY, WE HAVE A GOOD IDEA OF WHAT WE DON'T KNOW AND THEREFORE WE CAN DESIGN THE EXPERIMENTAL PROGRAMS

REQUIRED TO GAIN THAT KNOWLEDGE. WITH THE RENEWED INTEREST IN FIXED-FILM PROCESSES EVIDENT TODAY EVEN GREATER ENERGIES CAN BE BROUGHT TO BEAR UPON THE PROBLEM AND THE REMAINING GAPS IN KNOWLEDGE CAN BE FILLED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010037

PUBLICATION DATE: APR 82

TITLE: MODIFICATION AND IMPLEMENTATION OF MAINTENANCE AND OPERATIONAL SCHEDULES FOR WASTEWATER SYSTEMS AT ROADSIDE PARKS.

PERSONAL AUTHOR: MANOS, GEORGE P.

DESCRIPTOR: *FACILITIES; *MAINTENANCE; *OPERATIONS (WASTEWATER); *RECOMMENDATIONS; *RESEARCH REPORTS; *ROADSIDE PARKS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 210P. PRICE CODE: PC A10/MF A01. PB83-195784.

ABSTRACT: THE RESEARCH EFFORT INVOLVED AN EIGHTEEN MONTH STUDY OF THE EXISTING MAINTENANCE AND OPERATION SCHEDULES FOR WASTEWATER TREATMENT SYSTEMS AT ROADSIDE PARKS. TWENTY-NINE PARKS WERE VISITED DURING THE STUDY PERIOD; EACH ON THREE DIFFERENT OCCASIONS. THE EXISTING OPERATING AND MAINTENANCE DUTIES AND THE PLANT REMOVAL EFFICIENCIES WERE EVALUATED FOR MAXIMUM EFFICIENCIES IN BOTH TREATMENT AND PERSONNEL UTILIZATION. LABORATORY TESTS WERE PERFORMED TO DETERMINE THE EFFECTIVENESS OF WASTEWATER TREATMENT. BIOCHEMICAL OXIDATION DEMAND, SUSPENDED SOLIDS AND AMMONIA REMOVALS VARIED FROM 75-95%. RECOMMENDATIONS AND CONCLUSIONS INCLUDED: REPLACEMENT OR RENOVATION OF AERATION AND CHLORINATION EQUIPMENT IN DISTRICT 4, AND EARLY WARNING AND MONITORING SYSTEMS SHOULD BE CONSIDERED A DETERRENT TO VANDALISM. MOST OF THE PRESENT MECHANICAL PROBELMS ARE DUE TO EQUIPMENT OF EARLY DESIGN.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010038

PUBLICATION DATE: 82

TITLE: NITRIFICATION OF A MUNICIPAL TRICKLING FILTER EFFLUENT USING ROTATING BIOLOGICAL CONTACTORS.

PERSONAL AUTHOR: BLANC, FREDERIC C.; AND OTHERS

DESCRIPTOR: *BIOLOGICAL CONTACTORS; *MASSACHUSETTS; *NITRIFICATION; *OPERATIONS (WASTEWATER); *PILOT PLANTS; *TRICKLING FILTERS; *ROTATING BIOLOGICAL CONTACTORS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 18P. PRICE CODE: PC A02/MF A01.

ABSTRACT: THIS PAPER PRESENTS THE RESULTS OF A PILOT PLANT INVESTIGATION AND DESIGN FOR ACHIEVING SEASONAL NITRIFICATION OF A SECONDARY TRICKLING FILTER EFFLUENT. THE MUNICIPAL TREATMENT PLANT IN MILFORD, MASSACHUSETTS DISCHARGES INTO THE HEADWATERS OF THE CHARLES RIVER, A CLASS B STREAM. CONSEQUENTLY, THE COMMONWEALTH OF MASSACHUSETTS HAS REQUIRED A NITRIFIED EFFLUENT, PHOSPHORUS REMOVAL, AND EFFLUENT FILTRATION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010039

PUBLICATION DATE: MAY 83

TITLE: OIL SPILLS AND OIL POLLUTION IN THE ARCTIC AND ANTARCTIC. 1970-MAY 1983 (CITATIONS FROM POLLUTION ABSTRACTS).

DESCRIPTOR: *ARCTIC; *ANTARCTIC; *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *BIOLOGY; *ENVIRONMENTAL IMPACTS; *OIL SPILLS; *OIL POLLUTION; *POLLUTION CONTROL; *RESEARCH REPORTS; *TECHNOLOGY

DESCRIPTIVE NOTE: 83P. PRICE CODE: PC N01/MF N01. PB83-864397.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE ENVIRONMENTAL AND BIOLOGICAL CONSEQUENCES OF OIL SPILLS AND OIL POLLUTION IN THE ARCTIC REGIONS. TOPICS INCLUDE PREVENTION, DETECTION, BEHAVIOR, CONTROL, AND RECOVERY OF ARCITIC OIL SPILLS AND POLLUTION. SOME ATTENTION IS GIVEN TO EFFECTS UPON PARTICULAR BIOLOGICAL SPECIES. (THIS UPDATED BIBLIOGRAPHY CONTAINS 88 CITATIONS, 30 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010040

PUBLICATION DATE: 82

TITLE: OPERATION OF A RBC (ROTATING BIOLOGICAL CONTACTOR) FACILITY FOR THE TREATMENT OF MUNITION MANUFACTURING PLANT WASTEWATER.

PERSONAL AUTHOR: SMITH, LEONARD L.; GREENE, WAYNE C.

DESCRIPTOR: *BIOLOGICAL CONTACTORS; *CONFERENCE PROCEEDINGS; *FACILITIES; *INDUSTRIAL WASTES; *MUNITIONS; *OPERATIONS (WASTEWATER); *ROTATING BIOLOGICAL CONTACTORS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 16P. PRICE CODE: PC A02/MF A01. AD-P000 768/2.

ABSTRACT: BASED UPON THE ONE-YEAR OPERATION OF THE RBC FACILITY ON THE WASTEWATERS FROM THIS MANUFACTURING

FACILITY, THE FOLLOWING PRELIMINARY CONCLUSIONS ARE DRAWN: (1) THE BIOMASS ON RBC UNITS CAN STAND EXTREME STRESSES FROM PH, TEMPERATURE, AND SHOCK ORGANIC LOADS WITHOUT THE SYSTEM FAILING TO A DEGREE THAT IT DOES NOT RECOVER WHEN THE STRESS IS REMOVED. (2) A SUDDEN INCREASE IN ORGANIC LOADING WILL NOT IMMEDIATELY INCREASE THE ORGANIC REMOVAL RATE. HOWEVER, THE BIOMASS GROWTH WILL INCREASE RAPIDLY TO INCREASE THE REMOVAL RATE. THE BIOMASS GROWTH RATE WILL BE DIRECTLY RELATED TO THE WASTEWATER TEMPERATURE BECAUSE OF THE SLOWER GROWTH AT LOWER TEMPERATURES. (3) LOW WASTEWATER TEMPERATURE DOES NOT SIGNIFICANTLY DECREASE THE ORGANIC REMOVAL EFFICIENCY AT NORMAL OPERATING LEVELS. HOWEVER, AT HIGHER ORGANIC LOADINGS, THE RBC MAY NOT HAVE THE ADDITIONAL BIOMASS GROWTH.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010041

PUBLICATION DATE: 82

TITLE: OPERATOR'S VIEWPOINT OF WASTEWATER TREATMENT USING ROTATING BIOLOGICAL CONTACTORS.

PERSONAL AUTHOR: BERGS, MARY A.

DESCRIPTOR: *ATTITUDES; *BIOLOGICAL CONTACTORS; *CONFERENCE PROCEEDINGS; *OPERATIONS (WASTEWATER); *OPERATOR'S ATTITUDES; *ROTATING BIOLOGICAL CONTACTORS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 15P. PRICE CODE: PC A02/MF A01. AD-P000 802/9.

ABSTRACT: THE PURPOSE OF THIS REPORT IS TO PRESENT THE VIEWPOINT OF THE WASTEWATER TREATMENT PLANT OPERATOR, THE PERSON WHO MUST OPERATE THE RBC TREATMENT FACILITY EFFICIENTLY 24 HOURS A DAY, 7 DAYS A WEEK.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010042

PUBLICATION DATE: MAY 83

TITLE: PLASTICS AND ELASTOMERS: OFFSHORE APPLICATIONS. 1973-MAY 1983 (CITATIONS FROM THE RUBBER AND PLASTICS RESEARCH ASSOCIATION DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *CORROSION CONTROL; *ELASTOMERS; *OIL RECOVERY; *OIL SPILLS; *PLASTICS; *TECHNOLOGY

DESCRIPTIVE NOTE: 134P. PRICE CODE: PC N01/MF N01. PB83-864983.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE TECHNICAL UTILIZATION OF PLASTICS AND ELASTOMERS IN

SURVIVAL EQUIPMENT, INSTANT ISLANDS, OIL RECOVERY FROM SPILLS, AND SEA WATER CORROSION COATINGS. GLASS REINFORCED PLASTICS, POLYMETHYL METHACRYLATES, ACRYLIC RESINS, TEFLONS, EPOXY RESINS, POLYPROPYLENES, POLYETHYLENES, POLYURETHANES, AND NYLONS ARE AMONG THE MATERIALS INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 174 CITATIONS, 39 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010043

PUBLICATION DATE: FEB 83

TITLE: PRICKETT AND LONNQUIST AQUIFER SIMULATION PROGRAM FOR THE APPLE II MINICOMPUTER.

PERSONAL AUTHOR: HULL, L. C.

DESCRIPTOR: *AQUIFERS; *COMPUTER PROGRAMS; *COMPUTER SOFTWARE; *GROUNDWATER; *MODELS; *SIMULATIONS; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 25P. PRICE CODE: PC A02/MF A01. DE83008120.

ABSTRACT: THE PRICKETT AND LONNQUIST TWO-DIMENSIONAL GROUNDWATER MODEL HAS BEEN PROGRAMMED FOR THE APPLE II MINICOMPUTER. BOTH LEAKY AND NONLEAKY CONFINED AQUIFERS CAN BE SIMULATED. THE MODEL WAS ADAPTED FROM THE FORTRAN VERSION OF PRICKETT AND LONNQUIST. IN THE CONFIGURATION PRESENTED HERE, THE PROGRAM REQUIRES 64 K BITS OF MEMORY. BECAUSE OF THE LARGE NUMBER OF ARRAYS USED IN THE PROGRAM, AND MEMORY LIMITATIONS OF THE APPLE II, THE MAXIMUM GRID SIZE THAT CAN BE USED IS 20 ROWS BY 20 COLUMNS. INPUT TO THE PROGRAM IS INTERACTIVE, WITH PROMPTING BY THE COMPUTER. OUTPUT CONSISTS OF PREDICTED LEAD VALUES AT THE ROW-COLUMN INTERSECTIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010044

PUBLICATION DATE: MAR 83

TITLE: PROBLEMS, ISSUES, CONSTRAINTS, AND BARRIERS TO WATER QUALITY PLANNING AND MANAGEMENT IN URBAN AND URBANIZING AREAS (SMSA'S) IN TENN

PERSONAL AUTHOR: BOWEN, GEORGE E.; AND OTHERS

DESCRIPTOR: *MANAGEMENT; *PLANNING; *PROBLEM IDENTIFICATION; *RESEARCH REPORTS; *TENNESSEE; *URBAN AREAS; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 217P. PRICE CODE: PC A10/MF A01. PB83-196519.

ABSTRACT: RESULTS ARE PRESENTED OF A STATEWIDE STUDY BASED

ON THE SYSTEMATIC GATHERING OF INFORMATION ON WATER QUALITY MANAGEMENT ISSUES, PROBLEMS, AND BARRIERS FROM THREE SOURCES: A LITERATURE REVIEW, A QUESTIONNAIRE SENT TO EXPERTS WITHIN THE STATE, AND FIVE CASE STUDIES OF '208' AGENCIES WITHIN TENNESSEE. THE STUDY POINTS OUT CONSIDERABLE VARIATION AMONG WATER BASINS, RELATED TO BOTH WATER QUALITY AND THE CAUSES AND TREATMENT OF PROBLEMS. THE MAJOR PROBLEMS IDENTIFIED WERE: EROSION AND SEDIMENT, AGRICULTURAL AND FOREST RUNOFF, SLUDGE, FLOODING, CONSTRUCTION RUNOFF, LOW DISSOLVED OXYGEN, FLOOD PLAIN DEVELOPMENT, EUTROPHICATION, ALGAL GROWTH AND CONTAMINATION FROM HAZARDOUS WASTES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010045

PUBLICATION DATE: 82

TITLE: RBC (ROTATING BIOLOGICAL CONTACTOR) FOR BOD AND AMMONIA NITROGEN REMOVALS AT PRINCETON WASTEWATER TREATMENT PLANT.

PERSONAL AUTHOR: LIN, SHUDAR; AND OTHERS

DESCRIPTOR: *BIOLOGICAL CONTACTORS; *CONFERENCE PROCEEDINGS; *OPERATIONS (WASTEWATER); *NITROGEN; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *ROTATING BIOLOGICAL CONTACTORS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 27P. PRICE CODE: PC A03/MF A01. AD-P000 753/4.

ABSTRACT: THE RBC SYSTEM AT PRINCETON IS DESIGNED AS A SECONDARY TREATMENT FOR THE REMOVAL OF BOD5 AND AMMONIA NITROGEN. AN INTENSIVE STUDY ON EACH STAGE UNDER NORMAL AND ARTIFICIAL SHOCK OPERATIONS WAS CARRIED OUT FOR OVER ONE YEAR. THIS PAPER DEALS WITH PRELIMINARY EVALUATION OF MEAN VALUES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010046

PUBLICATION DATE: 82

TITLE: RBC (ROTATING BIOLOGICAL CONTACTOR) UNIT: BEST IN SEWAGE TREATMENT FOR SAUDI ARABIA.

PERSONAL AUTHOR: BANNAGA, SHARAF ELDIN I.

DESCRIPTOR: *BIOLOGICAL CONTACTORS; *CONFERENCE PROCEEDINGS; *FACILITIES; *EQUIPMENT; *OPERATIONS (WASTEWATER); *RECOMMENDATIONS; *ROTATING BIOLOGICAL CONTACTORS; *SAUDI ARABIA; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 14P. PRICE CODE: PC A02/MF A01. AD-P000 734/4.

ABSTRACT: THE ROTATING BIOLOGICAL CONTACTORS (RBC) UNIT IS A SECONDARY BIOLOGICAL TREATMENT UNIT FOR WASTE WATER. THE SYSTEM CONSISTS OF A NUMBER OF LARGE DIAMETER PLASTIC OR EXPANDED METAL DISCS MOUNTED ON A HORIZONTAL SHAFT AND PLACED IN A REACTION VESSEL WHICH IS OFTEN OF A SEMI-CIRCULAR CROSS-SECTION. NUMEROUS TERMS ARE USED THROUGHOUT THE WASTEWATER TREATMENT LITERATURE TO DESIGNATE RBC'S. AMONG THE TRADE TERMS IN CURRENT USE ARE THE BIO-DISC, BIO-SURF, AERO-SURF, SURFACT, BIO-SPERIAL, ROTATING DISC, ETC. THE RBC UNITS HAVE BECOME WIDELY ACCEPTED IN RECENT YEARS, NOTABLY IN THE UNITED STATES, WHICH IS EVIDENCED BY THE GREAT NUMBER OF PLANTS OPERATING OR UNDER CONSTRUCTION AND BY THE INFLUX OF SEVERAL NEW RBC MANUFACTURERS COMPETING INTO THE MARKET. THE UNIT SUITS BEST THE REQUIREMENTS OF SAUDI ARABIA AND ITS MANUFACTURE CAN BE CARRIED OUT LOCALLY. ENGINEERS OPERATING IN SAUDI ARABIA SHOULD BE ENCOURAGED TO KEEP THEIR DESIGNS AS SIMPLE AS POSSIBLE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010047

PUBLICATION DATE: 82

TITLE: ROTATING BIOLOGICAL CONTACTOR SCALE-UP AND DESIGN.

PERSONAL AUTHOR: STOVER, ENOS L.; KINCANNON, DON F.

DESCRIPTOR: *BIOLOGICAL CONTACTORS; *CONFERENCE PROCEEDINGS; *DESIGN; *EQUIPMENT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *ROTATING BIOLOGICAL CONTACTORS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 21P. PRICE CODE: PC A02/MF A01. AD-P000 800/3.

ABSTRACT: THE TOTAL ORGANIC LOADING APPROACH TO DESIGN OF RBC'S PREVIOUSLY DEVELOPED BY THE AUTHORS IN 1972, HAS BEEN PRESENTED IN DETAIL AND COMPARED TO OTHER DESIGN APPROACHES. THE ADVANTAGES AND BENEFITS OF THIS RBC DESIGN METHOD COMPARED TO OTHER EXISTING DESIGN APPROACHES HAS BEEN DEMONSTRATED. AND YES, THE QUESTION OF WHICH PARAMETER, HYDRAULIC LOADING, ORGANIC CONCENTRATION OR TOTAL ORGANIC LOADING, TO USE FOR PROPER DESIGN AND OPERATION OF THE RBC PROCESS HAS BEEN ANSWERED. ANY DESIGN METHOD BASED ON ZERO, FIRST, OR SECOND ORDER RATE KINETICS WILL BE LIMITED TO LOADINGS CONDITIONS WITHIN A SPECIFIC LOADING RANGE FOR DESIGN OF RBC'S. DESIGN IN TERMS OF FIRST ORDER REACTION KINETICS WILL REQUIRE DETERMINITION OF TWO SEPARATE REACTION RATE CONSTANTS. DEPENDING ON THE OPERATING CONDITIONS OR LOADING CONDITION OF AN RBC, THE KINETIC REMOVAL RATES THROUGH THE SYSTEM CAN BE SHOWN TO FOLLOW APPARENT ZERO, FIRST, OR SECOND ORDER REACTION RATE KINETICS. MONOD KINETICS ALSO PREDICTS THE MAXIMUM BOD REMOVAL RATE OBSERVED IN RBC'S.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010048
PUBLICATION DATE: 82

TITLE: SMALL WASTEWATER TREATMENT SYSTEMS USING SOIL PURIFICATION METHOD.

PERSONAL AUTHOR: NIIMI, MASAAKI

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *CONSTRUCTION; *MAINTENANCE; *OPERATIONS (WASTEWATER); *SMALL SYSTEMS; *SOIL PURIFICATION METHOD; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 29P. PRICE CODE: PC A03/MF A01. AD-P000 748/4.

ABSTRACT: THE PURPOSE OF THE PAPER IS TO DESCRIBE UNIQUE FEATURES OF THE SOIL PURIFICATION SYSTEMS DEVELOPED IN JAPAN AND TO DISCUSS CONSTRUCTION, OPERATION, AND MAINTENANCE OF THE FOLLOWING SYSTEMS: (1) ENHANCEMENT OF TREATMENT BY USE OF SOIL COVER. IN THIS PROCESS, SOILS ARE NOT USED AS A MERE CONSTRUCTION MATERIALS, BUT THEY ARE EFFECTIVELY USED AS A MEDIA FOR SUPPORTING MICROBIAL LIFE. IN ACTUAL INSTALLATIONS, TREATMENT FACILITIES ARE CONSTRUCTED UNDERGROUND COVERED BY SOIL LAYER. TREATMENT EFFICIENCIES ARE OBSERVED TO BE GREATLY INCREASED BY THE USE OF SOIL COVER IN THESE INSTANCES, AND THE GROUND SURFACE CAN BE USED FOR LAWN AREA OR OTHER USES FOR ESTHETIC ENJOYMENT. (2) UNDERGROUND TRENCH SOIL PURIFICATION SYSTEM. BY INSTALLING AN IMPERMENABLE SHEET UNDER THE TRENCH, CAPILLARY ACTION OF SOILS IN HORIZONTAL DIRECTIONS IS ENHANCED, THUS PREVENTING GROUNDWATER POLLUTION DUE TO ENHANCED SOIL PURIFICATION IN AEROBIC SOIL ZONE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010049

PUBLICATION DATE: 82

TITLE: START-UP AND SHOCK LOADING CHARACTERISTICS OF A ROTATING BIOLOGICAL CONTACTOR PACKAGE PLANT.

PERSONAL AUTHOR: FRY, FRALEY F.; AND OTHERS

DESCRIPTOR: *BIOLOGICAL CONTACTORS; *CONFERENCE PROCEEDINGS; *PACKAGE PLANTS; *OPERATIONS (WASTEWATER); *PILOT PLANTS; *RESEARCH REPORTS; *ROTATING BIOLOGICAL CONTACTORS; *START-UP; *WASTEWATER TREATMENT; *SHOCK LOADING

DESCRIPTIVE NOTE: 28P. PRICE CODE: PC A03/MF A01. AD-P000 751/8.

ABSTRACT: THE PURPOSE OF THIS INVESTIGATION WAS TO PROVIDE START-UP AND SHOCK LOADING RESPONSE DATA FOR AN RBC PILOT PLANT RECEIVING PRIMARY EFFLUENT FROM A MUNICIPAL WASTEWATER TREATMENT PLANT. DATA ARE PRESENTED FOR COD, NITRIFICATION, DO, AND BIOMASS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010050
PUBLICATION DATE: MAR 83

TITLE: STATEWIDE EVALUATION OF TRACE ELEMENT ACCUMULATION FROM LONG TERM DISPOSAL OF WASTE WATER.

PERSONAL AUTHOR: OLSON, BETTY H.; AND OTHERS

DESCRIPTOR: *ACCUMULATION; EFFLUENTS; *LAND APPLICATION; *METALS; *PERFORMANCE EVALUATION; *SAMPLING; *WASTEWATER; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 133P. PRICE CODE: PC A07/MF A01. PB83-196444.

ABSTRACT: IN THIS STUDY TWENTY REUSE SAMPLING SITES WERE SELECTED ON THE BASIS OF THE FOLLOWING CRITERIA: LENGTH OF TIME THE SITE HAS RECEIVED WASTEWATER, AMOUNT AND MANNER OF APPLICATION, QUALITY OF WASTEWATER APPLIED, AND THE AVAILABILITY OF HISTORICAL DATA ON TRACE ELEMENT CONTENT IN WASTEWATER EFFLUENT. EACH SITE WAS VISITED ONCE DURING THE TWO YEAR STUDY. BOTH SOIL AND VEGETATION SAMPLES WERE COLLECTED FROM EACH SITE. THESE SAMPLES WERE ANALYZED FOR CD, CU, PB, NI AND ZN CONTENT. SOIL SAMPLES WERE ALSO ANALYZED FOR PH, CEC AND WATER CONTENT. RESULTS INDICATED THAT 9% OF THE FIELDS INVESTIGATED SHOWED AN ACCUMULATION OF TRACE ELEMENTS FROM REUSE PRACTICES. METAL ENRICHMENT WAS CONFINED TO THE UPPER LAYERS OF SOIL, BUT PENETRATED INTO THE SOIL COLUMN DEPENDING ON SOIL TYPE AND RATE OF WASTEWATER APPLICATION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010051

PUBLICATION DATE: 82

TITLE: STRUCTURAL ENGINEERING OF PLASTICS MEDIA FOR WASTEWATER TREATMENT BY FIXED FILM REACTORS.

PERSONAL AUTHOR: MABBOTT, JEAN W.

DESCRIPTOR: CONFERENCE PROCEEDINGS; *DESIGN; *ENGINEERING; *FIXED FILM REACTORS; *FACILITIES; *MATERIAL SELECTION; *PLASTICS MEDIA; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 9P. PRICE CODE: PC A02/MF A01. AD-P000 804/5.

ABSTRACT: A BALANCE BETWEEN PROCESS EFFICIENCY AND STRUCTURAL INTEGRITY IS THE PRIME OBJECTIVE IN DESIGNING A LARGE SCALE FIXED FILM REACTOR FOR WASTEWATER TREATMENT. VARIOUS CRITERIA MUST BE CONSIDERED BEFORE THE PROPER BIOLOGICAL OXIDATION MEDIA CAN BE SELECTED TO ACHIEVE AN OPTIMUM DESIGN. THIS PAPER EXAMINES THE CRITERIA FOR SELECTING PLASTIC MEDIA, ITS PERFORMANCE STANDARDS, AND ITS PROPERTIES, SUCH AS ITS MODULUS OF ELASTICITY AT THE MAXIMUM WORKING TEMPERATURES IT WILL WITHSTAND; THE ABILITY OF THE MEDIA TO RETAIN THESE PROPERTIES WHEN EXPOSED TO THE DELETERIOUS EFFECTS OF CHEMICALS, PHYSICAL IMPACT, AND

ULTRAVIOLET LIGHT AND THE MEDIA'S ABILITY TO REMAIN EFFICIENT AS BIOTA GROWTH ACCUMULATES ON ITS SURFACES. PERFORMANCE STANDARDS FOR DETERMINING THE MAXIMUM LOAD PLASTIC BIOFILTER MODULES CAN SUPPORT ARE ALSO DISCUSSED. THESE STANDARDS WERE DEVELOPED TO PROVIDE A MEDIA WHICH HAS STRUCTURAL STRENGTH TO REMAIN FUNCTIONAL FOR THE LIFE OF THE PROCESS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010052

PUBLICATION DATE: 82

TITLE: STUDY OF FIXED-FILM BIOLOGICAL CONTACTORS FOR RECREATIONAL AREA WASTEWATER TREATMENT APPLICATION.

PERSONAL AUTHOR: POON, CALVIN P. C.; AND OTHERS

DESCRIPTOR: *BIOLOGICAL CONTACTORS; *FIXED FILM CONTACTORS; CONFERENCE PROCEEDINGS; *FACILITIES; EXTENDED AERATION TREATMENT; LAGOON SYSTEMS; *PERFORMANCE EVALUATION; *RECREATIONAL AREAS; SEPTIC TANKS; SURVEYS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 18P. PRICE CODE: PC A02/MF A01. AD-P000 750/0

ABSTRACT: A SURVEY WAS CONDUCTED IN 1981 TO EVALUATE THE TYPE AND PERFORMANCE OF EXISTING WASTEWATER TREATMENT FACILITIES IN U.S. ARMY CORPS OF ENGINEERS CIVIL WORKS (CE) RECREATIONAL AREAS (1). IT WAS FOUND THAT SEPTIC TANK-LEACHING FIELD OR SEPTIC TANK-SAND FILTER SYSTEMS FOR SUBSURFACE DISCHARGE ARE BY FAR THE MOST USED TREATMENT SYSTEMS, FOLLOWED BY EXTENDED AERATION AND LAGOON SYSTEMS. OCCASIONAL HIGH SUSPENDED SOLID (SS) CONCENTRATION IN LAGOON EFFLUENTS IS NOT UNCOMMON SINCE DISPERSED GROWTH AND ALGAL CELLS DO NOT SETTLE WELL. UPSETS OF EXTENDED AERATION TREATMENT PLANTS ARE EXPERIENCED BY MANY RECREATIONAL AREAS FROM TIME TO TIME RESULTING IN BIOCHEMICAL OXYGEN DEMAND (BOD) AND SS CONCENTRATIONS HIGHER THAN THE ACCEPTABLE LIMITS. THIS PHENOMENON IS TYPICAL OF AN EXTENDED AERATION PROCESS WHICH HAS DISPERSED GROWTH LEADING TO POOR SETTLING IN THE FINAL CLARIFIER.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010053

PUBLICATION DATE: MAY 83

TITLE: SUPERTANKERS AND SUPERPORTS. 1974-MAY, 1983 (CITATIONS FROM OCEANIC ABSTRACTS).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *CONSTRUCTION; *ENVIRONMENTAL IMPACTS; *FACILITIES; *HARBORS; *OPERATIONS; *OIL SPILLS; *SHIPS

DESCRIPTIVE NOTE: 103P. PRICE CODE: PC N01/MF N01. PB83-864405.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING CONSTRUCTION AND OPERATION OF SUPERTANKERS, AND REQUIREMENTS FOR HARBOR FACILITIES. TOPICS INCLUDE OFFSHORE OIL PORTS AND MOORING SITES, ENVIRONMENTAL IMPACTS OF TANKER OIL SPILLS, DEEPWATER PORTS, AND PROPULSION PLANT ENGINEERING. THE SALES AND PURCHASES OF SUPERTANKERS BY NATIONS AND COMPANIES ARE ALSO INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 132 CITATIONS, 11 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010054

PUBLICATION DATE: MAY 83

TITLE: SYNTHETIC HYDROLOGY. 1977-MAY, 1983 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *HYDROLOGY; *MANAGEMENT; *MODELS; *PLANNING; *RESEARCH REPORTS; *SIMULATIONS; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 355P. PRICE CODE: PC N01/MF N01. PB83-864942.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING SIMULATION MODELS FOR WATER RESOURCE PLANNING AND EVALUATING WATER SUPPLY MANAGEMENT. THE STUDY OF SEASONAL RAINFALL, WATER RUNOFF, THE PERFORMANCE OF RIVER BASINS, AND FLOOD FREQUENCY ANALYSIS ARE AMONG THE TOPICS DISCUSSED. GAUSSIAN AND NONGAUSSIAN MODELS TO SIMULATE HYDROLOGIC PROCESSES ARE CONSIDERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 279 CITATIONS, 145 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010055

PUBLICATION DATE: 82

TITLE: TREATMENT OF HIGH-STRENGTH ORGANIC WASTES BY SUBMERGED MEDIA ANAEROBIC REACTORS STATE-OF-THE-ART REVIEW.

PERSONAL AUTHOR: WU, YEUN C.; AND OTHERS

DESCRIPTOR: *ANAEROBIC FILTRATION; *CONFERENCE PROCEEDINGS; *FIXED FILM REACTORS; *OPERATIONS (WASTEWATER); *RESEARCH REVIEWS; *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 27P. PRICE CODE: PC A03/MF A01. AD-P000 782/3.

ABSTRACT: THE ADVANTAGES INHERENT IN THE ANAEROBIC

FILTRATION PROCESS SUGGEST THAT IT IS WORTHY OF CONSIDERATION AS A BASIS FOR FULL SCALE WASTE TREATMENT FACILITIES. THE FIXED FILM ANAEROBIC PROCESS IS WELL SUITED TO HANDLING LARGE ORGANIC LOADS. HIGH COD REMOVALS CAN BE ACHIEVED, PARTICULARLY WITH HIGH STRENGTH WASTES, WITHOUT THE HIGH OPERATING COSTS THAT ARE ASSOCIATED WITH OTHER TREATMENT OPERATIONS WHICH USE AERATION OR PHYSICAL-CHEMICAL METHODS. ANAEROBIC DIGESTERS ALSO PRODUCE A USEABLE METHANE GAS WHICH COULD BE USED TO HEAT THE REACTORS. THE METHANE PRODUCTION IS ALMOST CERTAIN TO BE WELL IN EXCESS OF THE NECESSARY REQUIREMENTS FOR HEATING PURPOSES AND COULD POSSIBLY BE USED FOR ADDITIONAL HEATING OF THE TREATMENT FACILITY. RESEARCH HAS SHOWN THAT THE FILTER CAN SUCCESSFULLY TREAT MANY TYPES OF WASTE EFFICIENTLY. MORE QUANTITATIVE DATA FROM FIELD INSTALLATIONS AND LABORATORY PILOT PLANTS ARE NEEDED TO ESTABLISH DESIGN CRITERIA FOR THIS TREATMENT PROCESS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010056

PUBLICATION DATE: APR 82

TITLE: TREATMENT OF SANITARY WASTES AT INTERSTATE REST AREAS (REVISED).

PERSONAL AUTHOR: ETZEL, JAMES E.

DESCRIPTOR: *INDIANA; INTERSTATE REST AREAS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *REST AREAS; *RECYCLING; *SANITARY WASTES; *WATER REUSE; *WATER CONSERVATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 99P. PRICE CODE: PC A05/MF A01. PB83-196162.

ABSTRACT: THIS PROJECT IS A THREE-PHASED STUDY UNDERTAKEN BY PURDUE UNIVERSITY AND THE INDIANA STATE HIGHWAY COMMISSION. PHASE I DEALT WITH THE WASTEWATER TREATMENT PLANT DEVELOPMENT AND DESIGN PARAMETERS PERTAINING TO IT. PHASE 2 INVOLVED THE DETERMINATION OF ANTICIPATED LOADING FACTORS AT RESTSTOPS. PHASE 3 INVOLVED THE TESTING, ANALYSIS, AND EVALUATION OF THE ACTUAL PHASE 1 TREATMENT PLANT AT A HIGHWAY RESTSTOP. TWO SYSTEMS WERE TESTED ON OPPOSITE LANES OF INTERSTATE 65 BETWEEN LAFAYETTE, INDIANA AND INDIANAPOLIS, INDIANA. ONE SYSTEM USED RECYCLED EFFLUENT TO FLUSH THE TOILETS. THE OTHER WAS SIMILAR ONLY IT DID NOT UTILIZE RECYCLED WATER. THE INITIAL EFFORTS TO CORRECT SOME OF THE PROBLEMS WERE DIRECTED TO MINIMIZING THE WATER USE IN TOILET AND URINAL FLUSHING. THESE EFFORTS WERE DIRECTED TO THE USE OF LOW WATER USE FLUSH UNITS THAT WERE AIR ASSISTED. ALTHOUGH THIS CHANGE ALLEVIATED HYDRAULIC PROBLEMS IT DID NOTHING TO SOLVE THE OTHER PROBLEMS. AN EVENTUAL REDISIGN OF THE SYSTEM AND MAJOR RENOVATION INSTALLED THE SAME FABRIC FILTER AS PREVIOUSLY USED BUT IN A DIFFERENT GEOMETRIC CONFIGURATION AND COMBINED ALL RESTSTOP WASTES IN A SURGE TANK PRIOR TO THEIR INTRODUCTION INTO THE TREATMENT UNITS ON THE MEN'S AND WOMEN'S SIDE OF THE FACILITY. THESE FINAL MODIFICATIONS RESULTED IN A SYSTEM WHICH WAS FOUND TO BE OPERABLE AND WHICH IS THE MAJOR ITEM COVERED BY THIS REPORT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010057

PUBLICATION DATE: 82

TITLE: TROUBLESHOOTING AN EXISTING RBC (ROTATING BIOLOGICAL CONTACTOR) FACILITY.

PERSONAL AUTHOR: NEWBRY, B. W.; AND OTHERS

DESCRIPTOR: *AERATION; *BIOLOGICAL CONTACTORS; *EQUIPMENT; *OPERATIONS (WASTEWATER); *ORGANIC OVERLOADS; *ROTATING BIOLOGICAL CONTACTORS; *TROUBLESHOOTING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 21P. PRICE CODE: PC A02/MF A01. AD-0000 80[illegible]7.

ABSTRACT: ANALYSIS OF THE PROBLEMS EXPERIENCED WITH THE RBCS AT THE KIRKSVILLE WWTP INDICATED THAT PERFORMANCE PROBLEMS ARE ASSOCIATED WITH ORGANIC OVERLOADING. IT ALSO APPEARS THAT ORGANIC OVERLOADING IS THE PRINCIPAL CONTRIBUTING CAUSE OF THE LARGE NUMBER OF SHAFT FAILURES THAT TAVE BEEN EXPERIENCED. THIS ORGANIC OVERLOADING RESULTS IN EXCESSIVE GROWTH OF BIOMASS WHICH IS NOT SLOUGHED, AND CAUSES STRUCTURAL OVERLOADING OF THE RBC SHAFTS. AERATION EFFECTIVELY INCREASES BIOMASS SLOUGHING, REDUCING THE STRUCTURAL LOADS ON THE SHAFTS. AT THE KIRKSVILLE WWTP, AERATION OF THE FIRST THREE BAYS IN EACH TRAIN AT 200 CFM SHOULD PROVIDE ADEQUATE BIOMASS SLOUGHING TO MAINTAIN STRUCTURAL LOADS AT ALLOWABLE LEVELS, UNDER CURRENT AND PROJECTED FUTURE ORGANIC LOADING CONDITIONS. SOME IMPROVEMENT IN PROCESS PERFORMANCE FOR SBOD5 REMOVAL APPEARED TO RESULT FROM AERATION. HOWEVER, IT WAS CONCLUDED THAT AT THE DESIGN ORGANIC LOADING THE WWTP WILL LIKELY NOT MEET ITS PERFORMANCE OBJECTIVE EVEN WITH REASONABLE SUPPLEMENTAL AERATION. SUPPLEMENTAL AERATION, COMBINED WITH REDUCTIONS IN LOADINGS TO LEVELS RECOMMENDED BY THE MANUFACTURER, WILL BE REQUIRED TO PROVIDE ADEQUATE WASTEWATER TREATMENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010058

PUBLICATION DATE: 82

TITLE: UPGRADING ACTIVATED SLUDGE PROCESS WITH ROTATING BIOLOGICAL CONTACTORS.

PERSONAL AUTHOR: WARD, ROGER C.; GOBLE, JAMES F.

DESCRIPTOR: *ACTIVATED SLUDGE; *BIOLOGICAL CONTACTORS; *CONFERENCE PROCEEDINGS; *DESIGN; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *ROTATING BIOLOGICAL CONTACTORS; *SLUDGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 16P. PRICE CODE: PC A02/MF A01. AD-P000 754/2.

ABSTRACT: THIS PAPER PRESENTS: (1) THE DESIGN METHODOLOGY USED FOR THE SIZING AND LAYOUT OF THE RBC UNITS; (2) A COMPARISON OF THE FULL-SCALE OPERATIONAL DATA COLLECTED SINCE NOVEMBER, 1979 TO THE PERFORMANCE PREDICTED BY THE DESIGN METHODOLOGY; (3) THE OPERATIONAL FACTORS WHICH AFFECTED THE PERFORMANCE OF THE RBC UNITS; AND (4) THE ENHANCEMENTS TO THE OVERALL PLANT PERFORMANCE (E.G., NITRIFICATION AND SECONDARY CLARIFICATION) WHICH ARE ATTRIBUTED TO THE RBC PROCESS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010059

PUBLICATION DATE: 82

TITLE: UPGRADING WITH SUBMERGED BIOLOGICAL FILTERS.

PERSONAL AUTHOR: MATTESON, ORVAL Q.

DESCRIPTOR: *AEROBIC TREATMENT; *BIOLOGICAL FILTERS; *FILTERS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 20P. PRICE CODE: PC A02/MF A01. AD-P000 752/6.

ABSTRACT: IT IS NOW POSSIBLE TO MATERIALLY UPGRADE ANY AEROBIC WASTEWATER TREATMENT SYSTEM BY JUST ADDING THREE TYPES OF VERY SIMPLE DEVICES TO THE SECONDARY AERATION AND SETTLING TANKS, WITH THE WORK DONE IN-HOUSE WITH OFF-THE-SHELF MATERIALS. IT MAKES NO DIFFERENCE HOW BIG THE SYSTEMS ARE OR OF WHAT TYPE. AND, THE COST OF DOING THIS, RELATED TO A GPD BASIS, IS LOW FOR A VERY SMALL SYSTEM AND NOMINAL FOR A BIG SYSTEM. FURTHER, IF THE PRIMARY TREATMENT COMPONENT IS THEN ELIMINATED, EXCEPT FOR NON-ORGANIC GRIT REMOVAL, THE TOTAL OVERALL TREATMENT WILL BE EVEN BETTER THAN IT WAS AND MUCH LESS EXPENSIVE. DIGESTER LOADS WILL BE DECREASED, AND IN MANY CASES THE DIGESTERS CAN BE ELIMINATED, AS CAN TERTIARY TREATMENT. A WORKING SYSTEM INCORPORATING THESE TECHNIQUES AND DEVICES HAS BEEN OPERATING IN JACKSONVILLE, ALABAMA, FOR OVER EIGHT YEARS, WITH ROTIFERS CLEARLY VISIBLE IN ITS CLARIFIER, CONSISTENTLY PRODUCING AN EFFLUENT OF 10 BOD5/SS MG/1, + OR -, EVEN UNDER PERIODS OF FORCED EXTREME OVERLOADS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010060

PUBLICATION DATE: 82

TITLE: USE OF PLASTIC MEDIA TRICKLING FILTERS--TWO CASE HISTORIES.

PERSONAL AUTHOR: SAMPAYO, FELIX F.

DESCRIPTOR: *BIOLOGICAL PROCESSES; *CASE HISTORIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PLASTIC MEDIA; *TRICKLING FILTERS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 32P. PRICE CODE: PC A03/MF A01. AD-P000 758/3.

ABSTRACT: OVER THE LAST TEN YEARS, JONES 8 HENRY ENGINEERS HAS INVESTIGATED THE USE OF FIXED FILM BIOLOGICAL PROCESSES AT A NUMBER OF LOCATIONS IN THE GREAT LAKES AREA. APPROXIMATELY HALF OF THESE STUDIES HAVE BEEN DIRECTED TOWARD THE TREATMENT OF HIGH STRENGTH WASTE AND HALF TOWARD THE PRODUCTION OF NITRIFIED EFFLUENTS. IN SOME CASES, THE INVESTIGATIONS HAVE INCLUDED ROTATING BIOLOGICAL CONTACTORS AND TRICKLING FILTERS. THIS PAPER DISCUSSES TWO CASE HISTORIES ON THE USE OF PLASTIC MEDIA TRICKLING FILTERS. ONE OF THE CASE HISTORIES DEALS WITH THE TREATMENT OF HIGH STRENGTH WASTES AT KALAMAZOO, MICHIGAN AND THE OTHER WITH NITRIFICATION OF THE LIMA, OHIO SECONDARY EFFLUENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010061

PUBLICATION DATE: 82

TITLE: USE OF SUPPLEMENTAL AERATION AND PH ADJUSTMENT TO IMPROVE NITRIFICATION IN A FULL SCALE ROTATING BIOLOGICAL CONTACTOR SYSTEM.

PERSONAL AUTHOR: ALBERT, JAMES L.

DESCRIPTOR: *AERATION; *BIOLOGICAL CONTACTORS; *CONFERENCE PROCEEDINGS; *NITRIFICATION; *OPERATIONS (WASTEWATER); *PH; *ROTATING BIOLOGICAL CONTACTORS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 25P. PRICE CODE: PC A02/MF A01. AD-P000 755/9.

ABSTRACT: THE SUPPLEMENTAL AERATION OF THE (ROTATING BIOLOGICAL CONTACTOR) SYSTEM ELIMINATED NUISANCE ORGANISMS, ENHANCED (BIOLOGICAL OXYGEN DEMAND) AND NH3-N REMOVAL, AND PROVIDED THE OPERATIONAL FLEXIBILITY TO CONTROL THE THICKNESS OF BIOMASS GROWTH ON THE MEDIA. PLACEMENT OF AIR DIFFUSERS INCREASED NOT ONLY BOD5-S REMOVAL, BUT ALSO INCREASED NH3-N REMOVAL. STAGES SHOULD BE MAINTAINED AT 2.5 MG/L IN STAGES WHERE MAXIMUM NITRIFICATION RATES ARE EXPECTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010062

PUBLICATION DATE: MAY 83

TITLE: WATER CHEMISTRY: ANALYSIS FOR HEAVY METALS. 1977-

MAY, 1983 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE).

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *ECOLOGY; *HEAVY METALS; *LABORATORY PROCEDURES; *POLLUTION; *WATER CHEMISTRY; *WATER QUALITY

DESCRIPTIVE NOTE: 463P. PRICE CODE: PC N01/MF N01. PB83-864793.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING WATER QUALITY PARAMETERS OF ON-STREAM AND OFF-STREAM SITES WITH SPECIFIC REFERENCE TO HEAVY METAL CONTAMINATION. METHODS FOR INDIVIDUAL AND SIMULTANEOUS MULTIELEMENT DETERMINATIONS ARE DISCUSSED. INTERFERENCE EFFECTS AND METHODS TO MINIMIZE THESE EFFECTS ARE CONSIDERED. THE ECOLOGICAL CONSEQUENCES OF HEAVY METAL CONTAMINATION ARE ALSO PRESENTED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 330 CITATIONS, 158 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010063

PUBLICATION DATE: MAY 83

TITLE: WATER HYACINTHS: WASTE TREATMENT AND METHANE PRODUCTION. 1979-MAY, 1983 (CITATIONS FROM THE ENERGY DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *ENERGY; *METHANE PRODUCTION; *WATER HYACINTHS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 103P. PRICE CODE: PC N01/MF N01. PB83-864520.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE USE OF WATER HYACINTHS IN WASTE TREATMENT AND METHANE PRODUCTION. ANAEROBIC DIGESTION PROCESSES, WASTE PROCESSING, AND DIGESTION CONDITIONS ARE DISCUSSED. WATER HYACINTH WASTEWATER TREATMENT AND WATER QUALITY CONTROL ARE INCLUDED. ENERGY FARMING AND CROPPING THROUGH AQUATIC BIOMASS, FORESTRY, AND AGRICULTURAL PLANTS ARE CONSIDERED. (CONTAINS 86 CITATIONS FULLY INDEXED AND INCLUDING A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010064

PUBLICATION DATE: 83

TITLE: DISINFECTION OF SEWAGE SLUDGE: TECHNICAL, ECONOMIC, AND MICROBIOLOGICAL ASPECTS.

PERSONAL AUTHOR: BRUCE, A. M.; AND OTHERS

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *DISINFECTION; *ECONOMICS; *MICROBIOLOGY; *SLUDGE; *TECHNOLOGY; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 252P. PRICE: $34.95.

ABSTRACT: WASTEWATER SLUDGE DISPOSAL IS ADVANCING IN EUROPE. THESE PROCEEDINGS OF A ZURICH CONFERENCE ON THE SUBJECT PRIMARILY ADDRESS THE QUESTION OF BENEFITS DERIVED FROM PREPASTEURIZATION. A WIDE RANGE OF IMPORTANT ISSUES ARE DISCUSSED.

AVAILABILITY: KLUWER BOSTON, INC., 190 OLD DERBY STREET, HINGHAM, MA 02043

IRIS ACCESSION NUMBER: EW010065

PUBLICATION DATE: 83

TITLE: HANDBOOK OF INDUSTRIAL RESIDUES.

PERSONAL AUTHOR: DYER, JON C.; MIGNONE, NICHOLAS A.

DESCRIPTOR: COSTS; ECONOMICS; *INDUSTRIAL WASTES; *INDUSTRIAL RESIDUES; *MANAGEMENT; *OPERATIONS (WASTEWATER); *PLANNING; PUBLIC HEALTH; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 453P. PRICE: $54.00.

ABSTRACT: FEW WASTEWATER TREATMENT ISSUES WILL BE MORE PRESSING IN YEARS TO COME THAN HOW TO HANDLE RESIDUALS RESULTING FROM PRETREATMENT AND TREATMENT OF INDUSTRIAL WASTES. DECIDING HOW TO HANDLE THESE RESIDUALS WILL FORCE MUNICIPAL AND INDUSTRIAL MANAGERS TO COME TOGETHER AND COOPERATE. TO MAKE ANY PROGRESS, THESE MANAGERS MUST HAVE A SOLID BASE OF DATA AND CONCEPTS FROM WHICH TO WORK. THIS BOOK IS A STEP IN THAT DIRECTION.

AVAILABILITY: NOYES DATA CORP., MILL ROAD, PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW010066

PUBLICATION DATE: 82

TITLE: UNCONVENTIONAL WATER TREATMENT.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *COAGULATION; *CONFERENCE PROCEEDINGS; *FILTRATION; *OPERATIONS (WATER); *PILOT PLANTS; *TECHNOLOGY; *WATER TREATMENT

DESCRIPTIVE NOTE: 117P. PRICE: $15.00.

ABSTRACT: UNCONVENTIONAL TREATMENT METHODS SUCH AS COAGULANT RECOVERY, DIRECT FILTRATION, AND PILOT PLANT JUSTIFICATION ARE DISCUSSED IN THESE PROCEEDINGS FROM THE 24TH ANNUAL PUBLIC WATER SUPPLY ENGINEERS' CONFERENCE AT THE URBANA-CHAMPAIGN CAMPUS OF THE UNIVERSITY OF ILLINOIS.

AVAILABILITY: COLLEGE OF ENGINEERING, UNIVERSITY OF ILLINOIS, 112 ENGINEERING HALL, 1308 W. GREEN STREET, URBANA, IL 61801

IRIS ACCESSION NUMBER: EW010067

PUBLICATION DATE: 83

TITLE: THE INFLUENCE OF SEWAGE SLUDGE APPLICATION ON PHYSICAL AND BIOLOGICAL PROPERTIES OF SOILS.

PERSONAL AUTHOR: CATROUX, G.; AND OTHERS

DESCRIPTOR: *AGRICULTURE; *CONFERENCE PROCEEDINGS; *FERTILIZERS; *LAND APPLICATION; *RESEARCH REPORTS; *SLUDGE; *SOILS; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 253P. PRICE: $34.95.

ABSTRACT: A CONFERENCE SPONSORED IN 1981 BY THE COMMISSION OF THE EUROPEAN COMMUNITIES ADDRESSED THE QUESTION OF WHAT EFFECTS WASTEWATER SLUDGES HAVE ON THE PHYSICAL PROPERTIES OF SOILS ON WHICH THEY ARE USED AS FERTILIZERS.

AVAILABILITY: KLUWER BOSTON, INC., 190 DERBY STREET, HINGHAM, MA 02043

IRIS ACCESSION NUMBER: EW010068

PUBLICATION DATE: 83

TITLE: QUANTITATIVE RISK ASSESSMENT IN REGULATION.

PERSONAL AUTHOR: LAVE, LESTER B.

DESCRIPTOR: *CASE STUDIES; *EPA; *OSHA; *QUANTITATIVE RISK ASSESSMENT; *REGULATIONS; RECOMMENDATIONS

DESCRIPTIVE NOTE: 264P. PRICE: $26.95.

ABSTRACT: THIS BOOK EXPLAINS THAT ALTHOUGH QUANTITATIVE RISK ASSESSMENT CAN BE EXCEEDINGLY DIFFICULT AND ITS RESULTS MUST OFTEN BE QUALIFIED, IT SHOULD STILL BE USED. IT ARGUES THAT NO OTHER TOOL CURRENTLY AVAILABLE CAN PRODUCE THE INFORMATION NEEDED FOR INTELLIGENT REGULATION. CASE STUDIES CONCERNING EPA AND OSHA ARE PRESENTED.

AVAILABILITY: BROOKINGS INSTITUTION, 1775 MASSACHUSETTS AVENUE, N.W., WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW010069

PUBLICATION DATE: 83

TITLE: RESTORATION OF SEWERAGE SYSTEMS.

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *INSPECTION; *MAINTENANCE; *MONITORING; *PLANNING; *REHABILITATION; *SEWERS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 308P. PRICE: $50.75.

ABSTRACT: THIS BOOK PRESENTS THE PROCEEDINGS OF AN INTERNATIONAL CONFERENCE SPONSORED BY THE INSTITUTION OF CIVIL ENGINEERS. ARTICLES EXAMINE THE PROBLEMS OF DETERIORATING SEWERS; INSPECTING, MONITORING OF THE SAME; PLANNING THE REHABILITATION OF SEWERS; AND METHODS FOR CORRECTING THE PROBLEMS.

AVAILABILITY: THOMAS TELFORD LIMITED, MARKETING AND SALES DEPARTMENT, 1-7 GREAT GEORGE STREET, LONDON SW1P 3AA

IRIS ACCESSION NUMBER: EW010071

PUBLICATION DATE: MAY 83

TITLE: AUTOMATIC ACQUISITION OF WATER QUALITY DATA. 1978-JANUARY 1982 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *DATA ACQUISITION; *MANAGEMENT; *MONITORING; *PLANNING; *REMOTE SENSING TECHNIQUES; *WATER QUALITY

DESCRIPTIVE NOTE: 304P. PRICE CODE: PC N01/MF N01. PB83-806257.

ABSTRACT: THIS BIBLIOGRAPHY CITES TECHNIQUES USED TO OBTAIN CONTINUOUS WATER QUALITY DATA, WITH EMPHASIS ON BIOLOGICAL AND SATELLITE REMOTE SENSING TECHNIQUES. MONITOR DESIGN AND PERFORMANCE AND GENERAL SYSTEMS MANAGEMENT AND PLANNING STUDIES ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 297 CITATIONS, NONE OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010072

PUBLICATION DATE: MAY 83

TITLE: AUTOMATIC ACQUISITION OF WATER QUALITY DATA. FEBRUARY 1982-APRIL 1983 (CITATIONS RROM THE NTIS DATA BASE).

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *DATA ACQUISITION; *MANAGEMENT; *MONITORING; *PLANNING; *REMOTE SENSING TECHNIQUES; *WATER QUALITY

DESCRIPTIVE NOTE: 112P. PRICE CODE: PC N01/MF N01. PB83-806265.

ABSTRACT: THIS BIBLIOGRAPHY CITES TECHNIQUES USED TO OBTAIN CONTINUOUS WATER QUALITY DATA, WITH EMPHASIS ON BIOLOGICAL AND SATELLITE REMOTE SENSING TECHNIQUES. MONITOR DESIGN AND PERFORMANCE AND GENERAL SYSTEMS MANAGEMENT AND PLANNING

STUDIES ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 103 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010073

PUBLICATION DATE: MAR 83

TITLE: AUTOMATION STUDY OF ACTIVATED SLUDGE PROCESSES.

PERSONAL AUTHOR: TANG, NING-HSI

DESCRIPTOR: *AUTOMATIC CONTROLS; *ACTIVATED SLUDGE; *CONTROL STRATEGIES; *OPERATIONS (WASTEWATER); *PROCESS CONTROLS; *PERFORMANCE EVALUATION; *SLUDGE; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 59P. PRICE CODE: PC A04/MF A01. PB83-202291.

ABSTRACT: THIS STUDY IS DIVIDED INTO THE FOLLOWING PARTS: (1) A SUMMARY OF THE EXISTING CONTROL STRATEGIES, (2) AN EVALUATION OF THE CONTROL STRATEGY SELECTED FOR DETAILED ANALYSIS, AND (3) THE DEVELOPMENT OF A FULLY AUTOMATIC CONTROL SYSTEM FOR THE ACTIVATED SLUDGE BIOLOGICAL TREATMENT PROCESS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE. 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010075

PUBLICATION DATE: MAY 83

TITLE: CADMIUM POLLUTION. NOVEMBER 1980-APRIL 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *AIR POLLUTION; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *CADMIUM; *DETECTION; *ENVIRONMENTAL IMPACTS; *POLLUTION CONTROL; *RESEARCH REPORTS; *TOXICITY; *WATER POLLUTION

DESCRIPTIVE NOTE: 256P. PRICE CODE: PC N01/MF N01. PB 3-806505.

ABSTRACT: AIR AND WATER POLLUTION BY CADMIUM ARE COVERED IN THIS BIBLIOGRAPHY. TOPICS INCLUDE SOURCES, CONTROL TECHNIQUES, EMISSIONS, TRANSPORT PROPERTIES, TOXICITY, EFFECTS ON PLANTS, ANIMALS, AND HUMANS, AND DETECTION AND ANALYSIS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 247 CITATIONS, 114 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010077

PUBLICATION DATE: FEB 83

TITLE: DEVELOPMENT DOCUMENT FOR EFFLUENT LIMITATIONS GUIDELINES AND STANDARDS FOR THE ELECTRICAL AND ELECTRONIC COMPONENTS POINT SOURCE CATEGORY. PHASE II.

DESCRIPTOR: *ELECTRICAL COMPONENTS; *ELECTRONIC COMPONENTS; *EFFLUENT LIMITATIONS; *EPA; *GUIDELINES; *INDUSTRIAL WASTES; *POINT SOURCE POLLUTION; *STANDARDS

DESCRIPTIVE NOTE: 146P. PRICE CODE: PC A07/MF A01. PB83-199208.

ABSTRACT: THIS DOCUMENT PRESENTS THE FINDINGS OF THE EPA PHASE II STUDY OF THE ELECTRICAL AND ELECTRONIC COMPONENTS POINT SOURCE CATEGORY. THE PHASE II STUDY EXAMINES THE ELECTRON TUBES AND LUMINISCENT MATERIALS SUBCATEGORIES OF ECEL, THE DOCUMENT (1) EXPLAINS WHICH SUBCATEGORIES AND POLLUTANTS ARE REGULATED/AND WHICH ARE NOT; (2) DISCUSSES THE REASONS; AND (3) EXPLAINS HOW THE LIMITATIONS WERE DEVELOPED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010078

PUBLICATION DATE: JUN 82

TITLE: DIAGNOSTIC OPERATIONAL MODELING PROGRAMS FOR MUNICIPAL WASTEWATER TREATMENT PLANTS - USERS MANUAL.

PERSONAL AUTHOR: SULLIVAN, DAVID L.; MONIER, ROY E.

DESCRIPTOR: *COMPUTER PROGRAMS; *COMPUTER SOFTWARE; *COMPUTER APPLICATIONS; *DIAGNOSTIC MODELING; *FACILITIES; *MANUALS; *MODELS; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 67P. PRICE: $1.00 PER DOCUMENT PLUS $0.03 PER PAGE.

ABSTRACT: THIS MANUAL DESCRIBES THE PHYSICAL SET-UP OF THE COMPUTER SYSTEM AND PRESENTS SEVERAL IMPORTANT 'DO'S AND DON'TS' INTENDED TO PREVENT THE USER FROM DAMAGING THE COMPUTER OR THE DISKETTES. CHAPTER 3 CONTAINS A STEP-BY-STEP DESCRIPTION OF HOW TO RUN THE PROGRAMS AND OBTAIN NUMERICAL AND GRAPHICAL OUTPUT. CHAPTER 4 PRESENTS GUIDELINES FOR INTERPRETING THE PROGRAM OUTPUT AND A DISCUSSION OF THE LIMITS OF ACCURACY OF THE PROGRAMS. THESE PROGRAMS HAVE BEEN PREPARED FOR USE WITH THE APPLE II PLUS MINICOMPUTER. THE DIAGNOSTIC OPERATIONAL MODELING PROGRAMS ARE INTENDED TO PROVIDE A RELIABLE AND RAPID MEANS OF IDENTIFYING PROCESS LIMITATIONS AND OPERATIONAL DEFICIENCIES. PROGRAMS FOR THE FOLLOWING TEN TYPES OF MUNICIPAL WASTEWATER TREATMENT PLANTS ARE AVAILABLE: (1) PRIMARY TREATMENT, (2) CONVENTIONAL ACTIVATED SLUDGE, (3) SINGLE STAGE ACTIVATED SLUDGE FOR NITRIFICATION, (4) EXTENDED AERATION ACTIVATED SLUDGE, (5) EXTENDED AERATION OXIDATION DITCH, (6) CONTACT STABILIZATION, (7) SINGLE STAGE TRICKLING FILTER, (8) TWO

STAGE TRICKLING FILTER, (9) ACTIVATED BIO-FILTER, AND (10) ROTATING BIOLOGICAL CONTACTORS. THESE PROGRAMS ALLOW THE OPTION OF AN ANAEROBIC OR AEROBIC SLUDGE DIGESTION ANALYSIS

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW010079

PUBLICATION DATE: MAY 83

TITLE: ECOSYSTEM MODELS. MARCH 1982-APRIL 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *ECOSYSTEMS; *MODELS; *RESEARCH REPORTS; *WATER POLLUTION

DESCRIPTIVE NOTE: 183P. PRICE CODE: PC N01/MF N01. PB83-806323.

ABSTRACT: THE PREPARATION AND USE OF ECOSYSTEM MODELS ARE COVERED IN THIS BIBLIOGRAPHY OF FEDERALLY-FUNDED RESEARCH. MODELS FOR MARINE BIOLOGY, WILDLIFE, PLANTS, WATER POLLUTION, MICROORGANISMS FOOD CHAINS, RADIOACTIVE SUBSTANCES, LIMNOLOGY, AND DISEASES AS RELATED TO ECOSYSTEMS ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 174 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010080

PUBLICATION DATE: 80

TITLE: EDIPEMIOLOGICAL STUDY ON THE RELATIONSHIP BETWEEN WATER QUALITY AND HEALTH PARAMETERS IN THE NETHERLANDS. PART 1. INORGANIC WATER

PERSONAL AUTHOR: HARING, B. J. A.; AND OTHERS

DESCRIPTOR: *CARDIOVASCULAR DISEASE; *DRINKING WATER; *MINERALS; *NETHERLANDS; *PUBLIC HEALTH; *WATER HARDNESS; *WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 39P. PRICE CODE: PC E04/MF E01 PB83-200964.

ABSTRACT: CONTENTS: CORROSIVENESS OF DRINKING WATER AND CARDIOVASCULAR DISEASE MORTALITY; CHANGES IN THE MINERAL COMPOSITION OF FOOD AS A RESULT OF COOKING IN 'HARD' AND 'SOFT' WATERS; WATER HARDNESS AND MORTALITY IN THE NETHERLANDS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010081

PUBLICATION DATE: MAR 83

TITLE: ENVIRONMENTAL IMPACT STATEMENT, PHASE 1 REPORT: FRESHWATER WETLANDS FROM WASTEWATER MANAGEMENT.

DESCRIPTOR: *ENVIRONMENTAL IMPACTS; *ENVIRONMENTAL IMPACT STATEMENTS; *MANAGEMENT; *PROBLEM ASSESSMENT; *REPORTS; *WETLANDS; *WASTEWATER MANAGEMENT

DESCRIPTIVE NOTE: 400P. PRICE CODE: PC A17/MF A01. PB83-205237.

ABSTRACT: THE ENVIRONMENTAL IMPACT STATEMENT (EIS) IS BEING PREPARED BY EPA, REGION IV TO ASSESS THE USE OF FRESHWATER WETLANDS FOR WASTEWATER MANAGEMENT IN THE SOUTHEASTERN UNITED STATES. PEASE I OF THE EIS IS AN INVENTORY AND PROBLEM ASSESSMENT EFFORT. THE EXISTING AND POTENTIAL USE OF FRESHWATER WETLANDS FOR WASTEWATER MANAGEMENT WERE EXAMINED FROM THE STANDPOINT OF INSTITUTIONAL, SCIENTIFIC AND ENGINEERING CONCERNS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010082

PUBLICATION DATE: 82

TITLE: EXPERIMENTAL METHODS FOR EVALUATING THE HEALTH RISKS ASSOCIATED WITH ORGANIC CHEMICALS IN DRINKING WATER.

PERSONAL AUTHOR: BULL, R. J.

DESCRIPTOR: *CHEMICALS; *DRINKING WATER; EVALUATION; HEALTH; *ORGANIC CHEMICALS; *PUBLIC HEALTH; *RISK ASSESSMENT; *TOXICOLOGY; *WATER SUPPLY

DESCRIPTIVE NOTE: 19P. PRICE CODE: PC A02/MF A01. PB83-209734.

ABSTRACT: IDENTIFICATION OF A WIDE VARIETY OF ORGANIC CHEMICALS IN SURFACE AND GROUND WATERS HAS BROUGHT CONSIDERABLE ATTENTION TO THE PROBLEM OF ESTIMATING RISKS THESE CHEMICALS POSE TO HUMAN HEALTH. CONSIDERABLE UNCERTAINTY IS INVOLVED IN MAKING SUCH ESTIMATES BECAUSE IN MOST INSTANCES THE EXTRAPOLATIONS INVOLVED GO BEYOND THE REALM OF ACTUAL SCIENTIFIC DATA. IN RECENT YEARS IT HAS BEEN SHOWN THAT MANY COMMONLY USED BULK CHEMICALS PRODUCE TUMORS AT HIGH DOSES IN EXPERIMENTAL ANIMALS. THE VIEW HAS BEEN EXPRESSED THAT SOME OF THESE CHEMICALS PRODUCE CANCER THROUGH A NON-GENOTOXIC MECHANISM. THESE ARGUMENTS ARE BASED ON THE OBSERVATION THAT SUCH CHEMICALS PRODUCE OVERT TOXICITY IN THE TARGET TISSUE WHICH RESULTS IN A REGENERATIVE HYPERPLASIA. THE PRESENT PAPER ATTEMPTS TO INDICATE CRITICAL AREAS OF BASIC TOXICOLOGICAL RESEARCH THAT ARE NECESSARY TO RESOLVE THE SCIENTIFIC ISSUES IN THIS AREA.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010083

PUBLICATION DATE: APR 83

TITLE: ILLINOIS WATER QUALITY MANAGEMENT PLAN.

PERSONAL AUTHOR: PENDOWSKI, J.

DESCRIPTOR: *DECISION MAKING; *ILLINOIS; *MANAGEMENT; OBJECTIVES; PLANNING; *PLANS; *STATE PLANS; *WASTE DISPOSAL; *WATER QUALITY; *WATER RESOURCES; *WATER USE

DESCRIPTIVE NOTE: 164P. PRICE CODE: PC A08/MF A01. PB83-210591.

ABSTRACT: THE PURPOSE OF THE ILLINOIS WATER QUALITY MANAGEMENT (WQM) PLAN IS TO CONSOLIDATE AND STREAMLINE PORTIONS OF APPROVED STATE AND AREAWIDE WQM PLANS IN ORDER TO FACILITATE THEIR USAGE IN THE OPERATIONS OF ALL DESIGNATED WQM AGENCIES. THE WQM PLAN REPRESENTS A JOINT EFFORT BY THE FOUR AGENCIES WITH WQM PLANNING RESPONSIBILITIES. THE ILLINOIS WQM PLAN IS COMPRISED OF FOUR DISTINCT PARTS. PART ONE PROVIDES THE BASIC CONCEPTUAL FRAMEWORK AND OBJECTIVES OF THE PLAN. PART TWO OUTLINES THE PROCESS FOR POINT SOURCE DECISION-MAKING WITHIN THE WQM PLAN. PART THREE OF THE WQM PLAN IS DIVIDED INTO TWO MAJOR AREAS WHICH WERE IDENTIFIED IN THE INITIAL WATER QUALITY MANAGEMENT PLANS. THESE SECTIONS ARE: AGRICULTURE, CONSTRUCTION, STREAM USE/WATER QUALITY STANDARDS, HYDROGRAPHIC MODIFICATION, URBAN RUNOFF, MINERAL EXTRACTION: MINING, MINERAL EXTRACTION: OIL FIELD BRINE AND GROUNDWATER. THE GROUNDWATER SECTION INCLUDES RESIDUAL WASTES AND ON-SITE DISPOSAL. PART FOUR OF THIS DOCUMENT DISCUSSES MANAGEMENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010084

PUBLICATION DATE: APR 83

TITLE: INVESTIGATION OF THE ALTERNATIVES FOR WASTEWATER DISINFECTION: ECONOMIC, SOCIAL, AND TECHNICAL: A THEORETICAL AND EXPERIMENTAL INVESTIGATION OF THE DYNAMICS OF BREAKPOINT CHLORINATION IN DISPERSED FLOW REACTORS.

PERSONAL AUTHOR: STENSTROM, MICHAEL K.; TRAN, HOA G.

DESCRIPTOR: *CHLORINATION; *DISINFECTION; *MODELS; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 164P. PRICE CODE: PC A08/MF A01. PB83-203414.

ABSTRACT: THE DYNAMICS OF BREAKPOINT CHLORINATION WERE EXAMINED IN THREE CONTINUOUS DISPERSED FLOW REACTORS. SEVENTEEN EXPERIMENTS WERE PERFORMED IN THE THREE REACTORS OVER THE COURSE OF THE EXPERIMENTAL INVESTIGATIONS. CHLORINE RESIDUALS, INCLUDING FREE, MONOCHLORAMINE, DICHLORAMINE, AND NITROGEN TRICHLORIDE AND AMMONIA WERE ANALYZED SIMULTANEOUSLY. TO QUANTITATIVELY CHARACTERIZE THE BREAKPOINT REACTIONS, A MATHEMATICAL MODEL WAS DEVELOPED. THE MODEL CAN NOW BE USED TO SIMULATE CONTINUOUS FLOW CHLORINATION PROCESSES IN ORDER TO DEVELOP PROCESS OPERATING STRATEGIES TO MAXIMIZE OR MINIMIZE ANY GIVEN EXPERIMENTAL OBJECTIVE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010085

PUBLICATION DATE: MAR 83

TITLE: LABORATORY STUDY OF DYNAMIC-STATE CONTROL OF ACTIVATED SLUDGE PROCESSES.

PERSONAL AUTHOR: TANG, NING-HSI

DESCRIPTOR: *ACTIVATED SLUDGE; *LABORATORY STUDIES; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 48P. PRICE CODE: PC A03/MF A01. PB83-202309.

ABSTRACT: A LABORATORY STUDY ON USING THE SOLIDS FLUX CURVE FOR THE DYNAMIC-STATE CONTROL OF A COMPLETELY MIXED ACTIVATED SLUDGE PROCESS WAS CARRIED OUT. ACTIVATED SLUDGE OF A MUNICIPAL SEWAGE TREATMENT PLANT WAS TRANSPORTED TO THE LABORATORY. FIRST, THE G AND H VALUES OF THE SLUDGE SETTLING CHARACTERISTICS WERE DETERMINED; THEN USING THESE VALUES TOGETHER WITH THE VALUES OF THE SLUDGE SUSPENDED SOLIDS CONCENTRATION AND THE SURFACE AREA OF THE SETTLING TANK, A SLUDGE RECYCLE RATE WAS CALCULATED FOR A GIVEN INFLUENT FLOW RATE. THE LABORATORY ACTIVATED SLUDGE TREATMENT UNIT WAS OPERATED WITH VARIOUS INFLUENT FLOW RATES AND THEIR RESPECTIVE CALCULATED SLUDGE RECYCLE FLOW RATES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010087

PUBLICATION DATE: NOV 77

TITLE: METHODS FOR THE SENSORY EVALUATION OF WATER QUALITY.

PERSONAL AUTHOR: DE GRUNT, F. E., JR.; AND OTHERS

DESCRIPTOR: *ODORS; *SENSORY EVALUATION; *WATER QUALITY

DESCRIPTIVE NOTE: 49P. PRICE CODE: PC E04/MF E01. PB83-200717.

ABSTRACT: FOR THE CONSUMER THE TASTE OF DRINKING WATER GENERALLY IS THE MOST IMPORTANT QUALITY CRITERION. FOR RIVER- AND WASTE WATER, THE QUANTIFICATION OF THE ODOR NUISANCE IS ALSO IMPORTANT. FOR THE PEOPLE WHO LIVE OR WORK IN THE NEIGHBORHODO OF CONTAMINATED WATERS THE ODOR NUISANCE IS A SOURCE OF STRESS. A STRONG ODOR OFTEN INDICATES

POLLUTION AND THIS CAN ALSO MEAN EXPOSURE TO TOXIC LEVELS OF CONTAMINATION. ORGANOLEPTIC PROPERTIES OF DIFFERENT KINDS OF WATERS ARE MEASURED IN THE NETHERLANDS BY THE NATIONAL INSTITUTE FOR WATER SUPPLY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010088

PUBLICATION DATE: SEP 81

TITLE: NATIONAL ENVIRONMENTAL DATA REFERRAL SERVICE: PROGRAM DEVELOPMENT PLAN.

DESCRIPTOR: *BENEFITS; *DESIGN; *ENVIRONMENTAL DATA; *NATIONAL ENVIRONMENTAL DATA REFERRAL SERVICE; *PROGRAM DESCRIPTIONS; *REQUIREMENTS

DESCRIPTIVE NOTE: 43P. PRICE CODE: PC A03/MF A01. PB83-197772.

ABSTRACT: THE ENVIRONMENTAL DATA AND INFORMATION SERVICE IS DEVELOPING A NATIONAL ENVIRONMENTAL DATA REFERRAL SERVICE IN RESPONSE TO NATIONAL NEEDS FOR IMPROVED ACCESS TO A BROAD RANGE OF ENVIRONMENTAL DATA. THE SERVICE PROVIDES A READILY ACCESSIBLE MEANS FOR ANYONE WHO NEEDS ENVIRONMENTAL DATA TO FIND OUT WHETHER THE RELEVANT DATA EXIST AND, IF SO, WHERE AND HOW THEY MAY BE OBTAINED. THE PLAN LISTS AND DISCUSSES THE REQUIREMENTS AND BENEFITS EXPECTED FROM UNIFIED MANAGEMENT AND IMPROVED ACCESS. A SET OF DESIGN CRITERIA IS GIVEN.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010089

PUBLICATION DATE: MAY 83

TITLE: OIL POLLUTION DETECTION AND SENSING. 1976-APRIL 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *CHEMICAL ANALYSIS; *DETECTION; *INDUSTRIAL WASTES; *OIL POLLUTION; *OIL SPILLS; *SAMPLING; *SEWAGE; *WASTEWATER

DESCRIPTIVE NOTE: 278P. PRICE CODE: PC N01/MF N01. PB83-806380.

ABSTRACT: CITATIONS OF RESEARCH ON SAMPLING, DETECTION, AND CHEMICAL ANALYSIS OF OIL IN WATER ARE PRESENTED. STUDIES ON REMOTE SENSING PRINCIPALLY USING RADAR, OCEAN WAVE DAMPING, AND INFRARED DETECTION ARE INCLUDED. THE CLASSIFICATION, PATTERN RECOGNITION, LUMINESCENCE, GAS CHROMATOGRAPHY, AND NEUTRON ACTIVATION ANALYSIS OF OILS ARE REPORTED IN THESE ABSTRACTS. THE MAJORITY OF THESE CITATIONS CONCERN OIL SPILLS, BUT STUDIES ON OIL WASTES, INDUSTRIAL WASTES, BILGE WATER, AND SEWAGE ARE ALSO COVERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 267 CITATIONS, 41 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010090

PUBLICATION DATE: JUN 83

TITLE: OIL WATER SEPARATORS. 1970-MAY 1983 (CITATIONS FROM THE ENGINEERING INDEX DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *COSTS; *DESIGN; *OPERATIONS; *PERFORMANCE EVALUATION; OIL; *OIL SEPARATORS; *OIL SPILLS

DESCRIPTIVE NOTE: 201P. PRICE CODE: PC N01/MF N01. PB83-807024.

ABSTRACT: WORLDWIDE JOURNAL RESEARCH IS CITED ON THESE DEVICES, MAINLY FOR WATER POLLUTION CONTROL. A RANGE OF EQUIPMENT IS DESCRIBED, INCLUDING GRAVITY SEPARATORS, CENTRIFUGES, MEMBRANES, COALESCERS, FILTERS, DISTILLATION COLUMNS, AND FLOTATION UNITS. OIL RECOVERY FROM OIL SPILLS IS COVERED. SEPARATION OF THESE COMPONENTS IN BALLAST AND BILGE WATER, FACTORY EFFLUENTS, PETROLEUM REFINERIES, AND WASTE OIL TREATMENT IS STUDIED. DESIGN, OPERATION, COSTS, TESTING, AND EFFICIENCY OF THESE ARTICLES ARE REPORTED. THIS UPDATED BIBLIOGRAPHY CONTAINS 193 CITATIONS, 7 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010091

PUBLICATION DATE: JUN 83

TITLE: PAPER AND PULP INDUSTRY: BLEACHING WASTES POLLUTION. 1977-JUNE 1983 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE).

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *BLEACHING WASTES; *INDUSTRIAL WASTES; *PAPER INDUSTRY; *PULP INDUSTRY; *WASTE DISPOSAL; *WASTE TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 260P. PRICE CODE: PC N01/MF N01. PB83-866160.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE BIOLOGICAL AND CHEMICAL MODIFICATION OF PULP AND PAPER INDUSTRY BLEACHING WASTES. FOAM FRACTIONATION, ACTIVATED CARBON ADSORPTION, RESIN ADSORPTION, ULTRA FILTRATION, AND REVERSE OSMOSIS ARE AMONG THE CHEMICAL METHODS DISCUSSED. CHEMICAL ASSAYS TO DETECT AND MEASURE TOXIC WASTE EFFLUENTS ARE ALSO CONSIDERED. THE OXYGEN BLEACHING PROCESS IS BRIEFLY DISCUSSED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 190 CITATIONS, 10 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS

EDITION.)
AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010092

PUBLICATION DATE: JUN 83

TITLE: POLLUTION AND ITS CONTROL IN THE PAPER AND PULP INDUSTRY. MARCH 1982-MAY 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *ENVIRONMENTAL IMPACTS; *INDUSTRIAL WASTES; *POLLUTION CONTROL; *PAPER INDUSTRY; *PULP INDUSTRY; *RESEARCH REPORTS

DESCRIPTIVE NOTE: 35P. PRICE CODE: PC N01/MF N01. PB83-806802.

ABSTRACT: THE CITED REPORTS OF FEDERALLY-FUNDED RESEARCH COVER VARIOUS ASPECTS OF POLLUTION AND POLLUTION CONTROL IN THE PAPER AND PULP INDUSTRY. TOPICS INCLUDE CONTROL TECHNIQUES, TYPES OF WASTES, CONTROL COSTS, POLLUTION EFFECTS ON THE ENVIRONMENT, AND THE SOCIOECONOMIC FACTORS OF POLLUTION AND POLLUTION CONTROL.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010093

PUBLICATION DATE: MAY 83

TITLE: SEWAGE AND ORGANIC WASTE IRRIGATION. 1977-APRIL 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *ENVIRONMENTAL IMPACTS; *FERTILIZER; *IRRIGATION; *ORGANIC WASTES; *SEWAGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *WATER RESOURCES; *WATER REUSE

DESCRIPTIVE NOTE: 223P. PRICE CODE: PC N01/MF N01. PB83-806307.

ABSTRACT: VARIOUS ASPECTS OF USING SEWAGE AND ORGANIC FORM WASTES FOR IRRIGATION FERTILIZATION OR GROUND WATER RECHARGE ARE PRESENTED. TOPICS COVERED INCLUDE FEASIBILITY STUDIES, WATER RECLAMATION IN ARID REGIONS, ALLEVIATING SLUDGE DISPOSAL PROBLEMS, AND ECOLOGICAL EFFECTS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 213 CITATIONS, 35 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010094
PUBLICATION DATE: MAY 83

TITLE: SEWAGE AND ORGANIC WASTE IRRIGATION. 1979-APRIL 1983 (CITATIONS FROM THE ENGINEERING INDEX DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *COSTS; *FERTILIZERS; *IRRIGATION; *ORGANIC WASTES; *SEWAGE; *RESEARCH REPORTS; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *WATER REUSE

DESCRIPTIVE NOTE: 180P. PRICE CODE: PC N01/MF N01. PB83-806299.

ABSTRACT: CITATIONS FROM WORLDWIDE RESEARCH COVER ASPECTS OF USING SEWAGE SLUDGE, AND FEEDLOT WASTES FOR IRRIGATION, FERTILIZATION, OR GROUND WATER RECHARGE. TOPICS INCLUDE DESIGN AND COSTS OF IRRIGATION SYSTEMS FOR WASTE WATER, ALLEVIATING SLUDGE DISPOSAL PROBLEMS, NUTRIENT LEVELS IN GROUND WATER AFTER SEWAGE IRRIGATION, CONSTRAINTS, AND FEASIBILITY STUDIES. (THIS UPDATED BIBLIOGRAPHY CONTAINS 173 CITATIONS, 78 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010095

PUBLICATION DATE: JUN 83
TITLE: SEWAGE TREATMENT COSTS AND ECONOMICS. 1979-MAY 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *COSTS; *CONSTRUCTION; *ECONOMICS; *OPERATIONS (WASTEWATER); *RATES; *RESEARCH REPORTS; SEWAGE; *WASTEWATER TREATMENT; *USER CHARGES

DESCRIPTIVE NOTE: 226P. PRICE CODE: PC N01/MF N01. PB83-806919.

ABSTRACT: THE CITED REPORTS OF FEDERALLY-FUNDED RESEARCH DISCUSS THE COSTS AND ECONOMICS OF SEWAGE TREATMENT SYSTEMS, SEWERS, TREATMENT TECHNOLOGY, EFFLUENT DISCHARGE, AND SLUDGE DISPOSAL. MOST STUDIES COVER THE OVERALL CONSTRUCTION AND OPERATION COSTS OF SEWAGE TREATMENT PLANTS, WHEREAS OTHERS INCLUDE RATE STRUCTURES, FINANCING, USER CHARGES, AND BENEFITS OF REGIONALIZED PLANTS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 217 CITATIONS, 42 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010096

PUBLICATION DATE: MAY 83

TITLE: SHIPBOARD SEWAGE TREATMENT. 1964-MAY 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *INCINERATION; *OPERATIONS (WASTEWATER); *SHIPS; *SEWAGE; *SEWAGE TREATMENT; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 126P. PRICE CODE: PC N01/MF N01. PB83-806364.

ABSTRACT: THE BIBLIOGRAPHY INCLUDES RESEARCH FOR NEW AND EFFECTIVE DESIGNS OF SHIPBORNE SEWAGE TREATMENT SYSTEMS. THE PRINCIPAL TREATMENT METHODS ARE BY CHLORINATION, AERATION, BIOLOGICAL TREATMENT, INCINERATION, CHEMICAL REMOVAL, AND ACTIVATED CARBON. SHIPBOARD INCINERATORS AND SEA DISPOSAL ARE ALSO COVERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 116 CITATIONS, 2 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010097

PUBLICATION DATE: JUN 83

TITLE: TOXICITY OF ARSENIC. 1976-JUNE 1983 (CITATIONS FROM THE ENERGY DATA BASE).

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *ARSENIC; *ENVIRONMENTAL IMPACTS; *MONITORING; *POLLUTION; *TOXICITY

DESCRIPTIVE NOTE: 313P. PRICE CODE: PC N01/MF N01. PB83-866129.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION, AND OTHER HAZARDS OF ARSENIC. ENVIRONMENTAL POLLUTION ASSAYS, BIOLOGICAL MONITORING METHODS, AND CHEMICAL ASSAYS FOR THE DETECTION OF ARSENIC ARE DISCUSSED. POLLUTION FROM COAL FIRED AND GEOTHERMAL POWER PLANTS ARE CONSIDERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 237 CITATIONS, 33 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010098

PUBLICATION DATE: MAY 83

TITLE: TOXICITY OF NICKEL. 1976-MAY, 1983 (CITATIONS FROM THE ENERGY DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *ANALYTICAL TECHNIQUES; BIBLIOGRAPHIES; *ENVIRONMENTAL IMPACTS; *MONITORING; *NICKEL; *RESEARCH REPORTS; *TOXICITY

DESCRIPTIVE NOTE: 371P. PRICE CODE: PC N01/MF N01. PB83-865741.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION, AND OTHER HAZARDS OF NICKEL. ENVIRONMENTAL POLLUTION ASSAYS, BIOLOGICAL MONITORING METHODS, AND CHEMICAL ASSAYS FOR THE DETECTION OF NICKEL ARE DISCUSSED. THE TOXICITY OF NICKEL TO AQUATIC AND TERRESTRIAL FLORA AND FAUNA, INCLUDING MAN, ARE CONSIDERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 297 CITATIONS, 94 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010099

PUBLICATION DATE: MAY 83

TITLE: TOXICITY OF SELENIUM. 1970-MAY, 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *ENVIRONMENTAL IMPACTS; *RESEARCH REPORTS; *SELENIUM; *TOXICITY

DESCRIPTIVE NOTE: 179P. PRICE CODE: PC N01/MF N01. PB83-865824.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION, AND OTHER HAZARDS AND ADVERSE EFFECTS OF SELENIUM. THESE ASPECTS OF SELENIUM ARE DEALT WITH IN RELATION TO AQUATIC AND TERRESTRIAL FLORA AND FAUNA, INCLUDING HUMANS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 113 CITATIONS, 21 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010100

PUBLICATION DATE: MAY 83

TITLE: TOXICITY OF SELENIUM. 1976-MAY 1983 (CITATIONS FROM THE ENERGY DATA BASE).

DESCRIPTOR: *ANALYTICAL METHODS; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *ENVIRONMENTAL IMPACTS; *POLLUTION; *RESEARCH REPORTS; *SELENIUM; *TOXICITY

DESCRIPTIVE NOTE: 230P. PRICE CODE: PC N01/MF N01. PB83-865832.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION, AND

OTHER HAZARDS AND ADVERSE EFFECTS OF SELENIUM. THE DETECTION, CHARACTERIZATION, ANALYTICAL METHODS, AND REMOVAL FROM THE ENVIRONMENT ARE DISCUSSED. POLLUTION FROM COAL FIRED AND GEOTHERMAL POWER PLANTS ARE CONSIDERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 178 CITATIONS, 30 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010101

PUBLICATION DATE: FEB 83

TITLE: WATER HYACINTH WASTEWATER TREATMENT SYSTEM.

PERSONAL AUTHOR: SCHWEGLER, BENEDICT R., JR.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER HYACINTH; *WATER QUALITY

DESCRIPTIVE NOTE: 48P. PRICE CODE: PC A03/MF A01. PB83-211896.

ABSTRACT: A PROTOTYPE WATER HYACINTH WASTEWATER TREATMENT SYSTEM HAS BEEN IN OPERATION FOR TWO YEARS AT WALT DISNEY WORLD, NEAR ORLANDO, FLORIDA. TYPICALLY, THE HYACINTH SYSTEM REMOVES 80-90% TOTAL SUSPENDED SOLIDS AND B.O.D. FROM THE INFLUENT STREAM. MAJOR IMPACTS ON WATER QUALITY EXITING THE SYSTEM ARE: SEASONAL VARIATIONS IN SOLAR RADIATION, AIR AND WATER TEMPERATURE, OPERATIONAL PROBLEMS, PARTICULARLY HARVESTING EQUIPMENT BREAKDOWN, AND RETENTION TIME IN THE PONDS. PHOSPHORUS AND NITROGEN REMOVAL SHOW A STRONG SEASONAL DEPENDENCE. NITROGEN REMOVAL RATES SHOW A STRONG DEPENDENCE ON RETENTION TIMES,6.7 DRY METRIC TONS PER HECTARE YEAR (30 DRY TONS/ACRE YEAR) DURING THE SECOND YEAR OF OPERATION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010102

PUBLICATION DATE: MAY 83

TITLE: WATER RATES AND COSTS. 1964-MAY 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *BUSINESSES; *COSTS; *FARMS; *HOMES; *INDUSTRY; *RESEARCH REPORTS; *WATER RATES; *WATER SUPPLY

DESCRIPTIVE NOTE: 202P. PRICE CODE: PC N01/MF N01. PB83-806422.

ABSTRACT: THE BIBLIOGRAPHY OF FEDERALLY-FUNDED RESEARCH IS CONCERNED WITH WATER RATES, DIRECT AND INDIRECT. PRICING WATER FOR URBAN, RURAL, INDUSTRIAL, AND AGRICULTURAL USAGE IS DESCRIBED. CONSTRUCTION OF WATER TREATMENT AND SEWAGE FACILITIES AS IT AFFECTS THE COST OF WATER IS ALSO DESCRIBED, ALONG WITH PLANNING FOR NATIONAL, STATE, AND LOCAL GOVERNMENTS. ECONOMIC MODELS FOR WATER USE, AND SIMULATION FOR OPTIMAL PRICING OF WATER, ARE COVERED. DIRECT COSTS TO THE HOMEOWNER, INDUSTRIAL PLANTS, FARMS, AND BUSINESSES ARE ALSO CONSIDERED. (THE REPORT CONTAINS 194 CITATIONS, 29 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010103

PUBLICATION DATE: MAY 83

TITLE: WATER RIGHTS AND WATER LAW. 1979-MARCH 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *MANAGEMENT; *RESEARCH REPORTS; *WATER LAW; *WATER RIGHTS; *WATER QUALITY

DESCRIPTIVE NOTE: 178P. PRICE CODE: PC N01/MF N01. PB83-806372.

ABSTRACT: LEGAL ASPECTS OF INTERSTATE AND INTRASTATE WATER RIGHTS, WATER QUALITY, AND WATER MANAGEMENT ARE INVESTIGATED IN THESE RESEARCH REPORTS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 168 CITATIONS, 71 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010108

PUBLICATION DATE: AUG 83

TITLE: LOUISVILLE UTILITY CONSCIOUS OF BOTH EARNINGS AND COSTS.

PERSONAL AUTHOR: HERSCH, PAUL

DESCRIPTOR: *ADMINISTRATION; *COSTS; *COST EFFECTIVENESS; *EARNINGS; *MANAGEMENT; *PLANNING; *WATER UTILITIES; *WATER SUPPLY

DESCRIPTIVE NOTE: 12P.

ABSTRACT: DESCRIBED ARE SOME OF THE PRACTICES OF THE LOUISVILLE WATER CO. IN KENTUCKY TO MAINTAIN EARNINGS AND TO REDUCE COSTS.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N9

IRIS ACCESSION NUMBER: EW010109

PUBLICATION DATE: AUG 83

TITLE: SOLAR HEATED POTABLE WATER SYSTEM SAVES ARMY MONEY.

DESCRIPTOR: *ENERGY; *ENERGY CONSERVATION; *HEAT; *HOT WATER; *POTABLE WATER; *SOLAR ENERGY; *U.S. ARMY; *WATER HEATERS; *WATER SUPPLY

DESCRIPTIVE NOTE: 14-15P.

ABSTRACT: DESCRIBED IS A SOLAR HEATED POTABLE WATER SYSTEM AT FORT BENNING, GEORGIA. THE SYSTEM COMPLETED DURING THE WINTER OF 1982-83 PROVIDES HEATED WATER FOR FOOD PREPARATION, BATHING, AND LAUNDRY REQUIREMENTS FOR ABOUT 7,000 SOLDIERS.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT; V130 N9

IRIS ACCESSION NUMBER: EW010110

PUBLICATION DATE: AUG 83

TITLE: DEWATERING SYSTEM CUTS HAULING COSTS.

PERSONAL AUTHOR: LANGWORTHY, VIRGIL W.

DESCRIPTOR: *COSTS; *DEWATERING; *NEW JERSEY; *OPERATIONS (WASTEWATER); *SLUDGE; *SOM-A-SYSTEM; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 16-18P.

ABSTRACT: DESCRIBED IS A SYSTEM INSTALLED IN NEW JERSEY TO CUT HAULING COSTS FOR SLUDGE DISPOSAL. THE DEWATERING SYSTEM INSTALLED IS CALLED SOM-A-SYSTEM. THE SYSTEM IS BRIEFLY DESCRIBED.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT; V130 N9

IRIS ACCESSION NUMBER: EW010111

PUBLICATION DATE: AUG 83

TITLE: DIGESTER METHANE PRODUCES POWER DOLLARS.

PERSONAL AUTHOR: KARNEY, PATRICK T.

DESCRIPTOR: *COSTS; *ECONOMICS; *ENERGY CONSERVATION; *ENERGY; *METHANE; *HEAT RECOVERY; *MAINTENANCE; *GAS ENGINES; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 22-24P.

ABSTRACT: FIFTEEN YEARS OF EXPERIENCE WITH ENGINES FUELED BY DIGESTER GAS HAS CONFIRMED THE ECONOMIC SOUNDNESS OF THIS APPROACH TO ENERGY-SAVING TAKEN BY A MISSOURI WASTEWATER TREATMENT PLANT. METHANE FROM ANAEROBIC DIGESTERS IS USED TO FUEL INTERNAL COMBUSTION ENGINES. WASTE HEAT FROM THE ENGINES IS USED TO HEAT THE DIGESTERS AND ALL PLANT BUILDINGS.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT; V130 N9

IRIS ACCESSION NUMBER: EW010112

PUBLICATION DATE: AUG 83

TITLE: PUMPING SYSTEMS: OPPORTUNITIES FOR POWER SAVINGS.

PERSONAL AUTHOR: DEURER, ROBERT

DESCRIPTOR: *COSTS; *EFFICIENCY; *EQUIPMENT; *MAINTENANCE; *PUMPS; *PUMP SELECTION; *PUMP OPERATIONS; WATER UTILITIES; WASTEWATER UTILITIES

DESCRIPTIVE NOTE: 25-28P.

ABSTRACT: HUGE AMOUNTS OF POWER ARE NEEDED TO RUN THE MYRIAD OF PUMPS VITAL TO THE WATER/WASTEWATER INDUSTRY. OPTIMIZING PUMP SELECTION, INSTALLATION, AND OPERATING PRACTICES CAN PAY HEALTHY ENERGY-SAVING DIVIDENDS. VARIABLES TO CONSIDER IN PUMP SELECTION AND OPERATION ARE DESCRIBED.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT; V130 N9

IRIS ACCESSION NUMBER: EW010113

PUBLICATION DATE: AUG 83

TITLE: HOW WAUSAU SAVED $100,000 A YEAR IN ENERGY COSTS.

PERSONAL AUTHOR: GEHIN, JOSEPH L.; MINNICH, FREDERICK M.

DESCRIPTOR: *CASE STUDIES; *COSTS; *EFFICIENCY; *ENERGY CONSERVATION; *EQUIPMENT; *FACILITIES; *MANAGEMENT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT; *WISCONSIN

DESCRIPTIVE NOTE: 30-31P.

ABSTRACT: MODIFYING, IMPROVING, FINE-TUNING, AND GENERALLY TIGHTENING UP OPERATING PRACTICES WON A NATIONAL AWARD AND SAVED LOTS OF MONEY FOR A WISCONSIN WASTEWATER TREATMENT PLANT. SEVERAL PRACTICES ARE DESCRIBED.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT; V130 N9

IRIS ACCESSION NUMBER: EW010114

PUBLICATION DATE: AUG 83

TITLE: MODELING TELLS THE HYDRAULIC STORY.

PERSONAL AUTHOR: MILLER, THOMAS C., JR.

DESCRIPTOR: *CASE STUDIES; *COSTS; *HYDRAULIC MODELS;

*MANAGEMENT; *MODELS; *OPERATIONS (WATER); *PLANNING; *SIMULATION MODELING; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 34-35,50P.

ABSTRACT: METICULOUS PREPARATION CAN MAKE MODELING AN INVALUABLE ASSET FOR OPTIMIZING EXISTING OR PLANNED WATER DISTRIBUTION SYSTEMS. STEPS TO CONSIDER PRIOR TO DEVELOPING A MODEL ARE DESCRIBED. SEVERAL CASE HISTORIES DESCRIBING THE APPLICATION OF MODELING TO EXISTING AND NEW WATER SYSTEMS ARE INCLUDED.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N9

IRIS ACCESSION NUMBER: EW010116

PUBLICATION DATE: 83

TITLE: WHO'S WHO IN ENVIRONMENTAL TRAINING - 1983 EDITION.

DESCRIPTOR: *AIR POLLUTION; *DIRECTORIES; *HAZARDOUS MATERIALS; *INSTRUCTION; *MANAGEMENT; *NETA; *OPERATOR TRAINING; *OPERATIONS (WATER); *OPERATIONS (WASTEWATER); *SOLID WASTES; *TRAINERS; *TRAINING; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 41P.

ABSTRACT: THIS IS THE 1983 DIRECTORY OF MEMBERS OF THE NATIONAL ENVIRONMENTAL TRAINING ASSOCIATION. MEMBERS ARE LISTED ALPHABETICALLY AND BY STATE.

AVAILABILITY: NATIONAL ENVIRONMENTAL TRAINING ASSOCIATION, 158 SOUTH NAPOLEON STREET, P. O. BOX 346, VALPARAISO, IN 46383

IRIS ACCESSION NUMBER: EW010117

PUBLICATION DATE: 83

TITLE: SOLAR DOMESTIC HOT WATER SYSTEMS AND THE WATER PURVEYOR.

DESCRIPTOR: *CONTAMINATION; *CROSS CONNECTIONS; *DRINKING WATER; *GUIDES; *HOT WATER HEATERS; *PUBLIC HEALTH; *RECOMMENDATIONS; SOLAR ENERGY; *WATER QUALITY

DESCRIPTIVE NOTE: 12P. PRICE: $2.00.

ABSTRACT: THE PURPOSE OF THIS GUIDE IS TO ALERT WATER PURVEYORS OF THE POTENTIAL CROSS CONNECTION PROBLEMS THAT SOLAR DOMESTIC HOT WATER (DHW) SYSTEMS POSE. THE GUIDE PROVIDES INFORMATION TO HELP PEOPLE BETTER UNDERSTAND SOLAR DHW SYSTEMS, AND PRESENTS PRECAUTIONS THAT SHOULD BE TAKEN TO PROTECT THE CONSUMERS POTABLE HOT WATER SYSTEMS AND RECOMMENDATIONS TO PROTECT THE PUBLIC WATER SUPPLY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, PACIFIC NORTHWEST SECTION, 20584 S.W. ROSA DRIVE, ALOHA, OR 97002

IRIS ACCESSION NUMBER: EW010118

PUBLICATION DATE: 83

TITLE: ABC 1983 DIRECTORY OF CERTIFICATION AND TRAINING CONTACTS.

PERSONAL AUTHOR: MOEHLMANN, STEPHEN E.

DESCRIPTOR: *ABC; *CERTIFICATION; *DIRECTORIES; *OPERATIONS (WATER); *OPERATIONS (WASTEWATER); *STATE REPRESENTATIVES; *TRAINING; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 42P.

ABSTRACT: THIS DOCUMENT IS THE 1983 DIRECTORY FOR ABC. COMMITTEE MEMBERS AND U.S. AND CANADIAN CONTACTS FOR CERTIFICATION AND TRAINING ARE LISTED. IN ADDITION ADDRESSES FOR SELECTED ORGANIZATION, AGENCIES, AND PERSONNEL ARE LISTED.

AVAILABILITY: ABC, P. O. BOX 2266, AMES, IA 50010

IRIS ACCESSION NUMBER: EW010120

PUBLICATION DATE: JUN 82

TITLE: A TROUBLED PROJECT--RURAL WATER SYSTEMS AND ENVIRONMENTAL SANITATION IN PERU.

DESCRIPTOR: AID; CONSTRUCTION; COSTS; HEALTH EDUCATION; INTERNATIONAL AID; PERU; MANAGEMENT; PLANNING; PUBLIC HEALTH; RURAL AREAS; SANITATION; TRAINING; WATER SUPPLY

DESCRIPTIVE NOTE: 26P.

ABSTRACT: IN 1980 AND 1982 AID AUTHORIZED FUNDS TO INSTALL WATER SUPPLY SYSTEMS AND SANITATION FACILITIES AND TO PROVIDE SUPPORT ACTIVITIES TO IMPROVE THE HEALTH OF PEOPLE IN RURAL COMMUNITIES OF PERU. PROGRESS BY 1983 WAS MUCH LESS THAN PLANNED. THIS IS A REPORT BY THE U.S. GENERAL ACCOUNTING OFFICE REGARDING THE PROJECT. THE REPORT PRESENTS CONCLUSIONS AND RECOMMENDATIONS REGARDING THE PROJECT.

AVAILABILITY: U.S. GENERAL ACCOUNTING OFFICE, DOCUMENT HANDLING AND INFORMATION SERVICES FACILITY, P. O. BOX 6015, GAITHERSBURG, MD 20760

IRIS ACCESSION NUMBER: EW010123

PUBLICATION DATE: SEP 83

TITLE: A FORMULA FOR TECHNICAL TRAINING: TIME-TESTED INSTRUCTIONAL METHODS.

PERSONAL AUTHOR: PASHA, WILLIAM E.; TURNER, JAMES T.

DESCRIPTOR: *CREW TRAINING; *INDUSTRIES; *PLANNING; *PROGRAM DESCRIPTIONS; *SCOTT PAPER COMPANY; *TRAINING PROGRAMS; *TRAINING

DESCRIPTIVE NOTE: 14-17P.

ABSTRACT: DESCRIBED IS A PROGRAM USED BY SCOTT PAPER FOR DEVELOPING TECHNICIANS TO OPERATE MAJOR NEW PAPER EQUIPMENT.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL; V37 N9

IRIS ACCESSION NUMBER: EW010124

PUBLICATION DATE: SEP 83

TITLE: INSTRUCTIONAL SYSTEM WITHOUT THE BANG - BACK TO BASICS AT A NUCLEAR POWER PLANT.

PERSONAL AUTHOR: VANDERGRIFT, JIMMY D.

DESCRIPTOR: *INSTRUCTIONAL SYSTEMS; *INDUSTRIES; *NUCLEAR POWER PLANTS; *UTILITIES; *TRAINING; *TRAINING PROGRAMS

DESCRIPTIVE NOTE: 20-23P.

ABSTRACT: THREE MILE ISLAND AND ITS REPERCUSSIONS IN THE UTILITIES INDUSTRY DICTATED ADVANCED INSTRUCTIONAL SYSTEMS DEVELOPMENT AT ARKANSAS POWER AND LIGHT COMPANY. THE SYSTEM IS BASED ON A FIVE-STEP, INTERRELATED MODEL DERIVED FROM THE U.S. AIR FORCE'S INSTRUCTIONAL SYSTEM DEVELOPMENT PROCESS.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL; V37 N9

IRIS ACCESSION NUMBER: EW010125

PUBLICATION DATE: SEP 83

TITLE: LEARNING DISABLED TRAINEES: FINDING AND HELPING "HIDDEN HANDICAPPED."

PERSONAL AUTHOR: LEAN, ELIZABETH

DESCRIPTOR: *ADULT LEARNERS; *INSTRUCTION; *LEARNING; *LEARNING DISABILITIES; *TRAINING

DESCRIPTIVE NOTE: 56-65P.

ABSTRACT: MOST LEARNING DISABLED (LD) TRAINEES LOOK NO DIFFERENT FROM NON-LEARNING DISABLED TRAINEES, NOR DO THEY EXHIBIT OBVIOUS DISTINGUISHING BEHAVIOR. SELF-IDENTIFICATION IS THE IDEAL MEANS OF LOCATING THE LD TRAINEE AND THIS CAN OFTEN BE DONE BY SIMPLY ASKING. SEVERAL TYPES OF LEARNING DISABILITIES ARE CONSIDERED AND WAYS OF ACCOMMODATING THE LD ADULT ARE PRESENTED.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL; V37 N9

IRIS ACCESSION NUMBER: EW010126

PUBLICATION DATE: SEP 83

TITLE: CAN YOUR ORGANIZATION SUPPORT QUALITY CIRCLES? A PRACTICAL MODEL.

PERSONAL AUTHOR: LEONARD, JAMES F.

DESCRIPTOR: *MANAGEMENT; *MODELS; *ORGANIZATIONAL ASSESSMENT; *PLANNING; *QUALITY CIRCLES

DESCRIPTIVE NOTE: 66-72P.

ABSTRACT: PRESENTED IS A PRACTICAL MODEL TO GUIDE THE MANAGER THROUGH AN ASSESSMENT OF THE ORGANIZATION'S READINESS FOR THE ADOPTION OF QUALITY CIRCLES. SUCH AN ASSESSMENT WILL HELP DETERMINE WHETHER A QUALITY CIRCLE PROGRAM CAN SURVIVE AND SUCCEED.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL; V37 N9

IRIS ACCESSION NUMBER: EW010127

PUBLICATION DATE: SEP 83

TITLE: STYLE FEEDBACK FOR TRAINERS: AN OBJECTIVE OBSERVER SYSTEM.

PERSONAL AUTHOR: ROLAND, CHRISTOPHER

DESCRIPTOR: *INTERACTION ANALYSIS; *FLANDERS INTERACTION ANALYSIS SYSTEM; *TEACHER BEHAVIOR

DESCRIPTIVE NOTE: 76-81P.

ABSTRACT: PRESENTED IS AN INSTRUMENT FOR MEASURING VERBAL AND NONVERBAL INTERACTION BETWEEN THE TRAINER AND TRAINEES. THE INSTRUMENT IS THE CHEFFERS' ADAPTATION OF THE FLANDERS INTERACTION ANALYSIS SYSTEM.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL; V37 N9

IRIS ACCESSION NUMBER: EW010128

PUBLICATION DATE: JUN 83

TITLE: ASBESTOS IN DRINKING WATER. 1977-JUNE, 1983 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *ASBESTOS; *ANALYTICAL METHODS; BIBLIOGRAPHIES; *DRINKING WATER; *PUBLIC HEALTH; *RESEARCH REPORTS; *WATER TREATMENT

DESCRIPTIVE NOTE: 131P. PRICE CODE: PC N01/MF N01. PB83-867093.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING ASBESTOS FIBER CONTAMINATED DRINKING WATER. THE ROLE OF ASBESTOS CEMENT PIPES AND FACTORS INVOLVED IN THE RELEASE OF THE FIBERS ARE DISCUSSED. DISTRIBUTION DATA AND HEALTH EFFECTS ARE CONSIDERED. ANALYTICAL METHODS TO QUALITATE AND QUANTITATE ASBESTOS IN DRINKING WATER ARE ALSO DISCUSSED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 87 CITATIONS, 10 OF

WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)
AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010129

PUBLICATION DATE: APR 83

TITLE: COOPERATION IN URBAN WATER MANAGEMENT, CONFERENCE PROCEEDINGS.

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *MANAGEMENT; *PLANNING; *RESEARCH NEEDS; *URBAN AREAS; *WATER SUPPLY; *WATER RESOURCES

DESCRIPTIVE NOTE: 200P. PRICE CODE: PC A09/MF A01. PB83-217992.

ABSTRACT: CONFEREES EXPLORED AND PROPOSED MEANS FOR OVERCOMING OBSTACLES ENVISIONED BY WATER SUPPLY ENGINEERS THAT PREVENT OR ASSIGN LOW PRIORITY TO SOLUTIONS TO CRISES IN MUNICIPAL WATER SUPPLIES. PRIMARY OBJECTIVE OF THE CONFERENCE WAS TO DECIDE IF A BROADER AND MORE INTENSE STUDY BY THE NRC WAS NEEDED. A SECOND OBJECTIVE WAS TO PROVIDE GUIDANCE ON THE STATE OF RESEARCH NEEDS, DEVELOPMENT AND TECHNOLOGY TRANSFER NEEDS REGARDING MUNICIPAL WATER SUPPLIES. SPEAKER'S PRESENTATIONS AND A SUMMARY OF THE GENERAL DISCUSSION IS INCLUDED IN THESE PROCEEDINGS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010130

PUBLICATION DATE: JUN 83

TITLE: FRESH WATER MUSSELS AND WATER QUALITY. 1970-JUNE, 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *AQUATIC ENVIRONMENTS; BIBLIOGRAPHIES; *ENVIRONMENTAL IMPACTS; *FRESH WATER; *MOLLUSCS; *MONITORING; *RESEARCH; *SEDIMENTATION; *TOXIC SUBSTANCES; *WATER QUALITY

DESCRIPTIVE NOTE: 122P. PRICE CODE: PC N01/MF N01. PB83-866798.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE USE OF MOLLUSCS TO MONITOR WATER QUALITY, AND THE EFFECTS OF WATER QUALITY UPON THE DISTRIBUTION AND ABUNDANCE OF MOLLUSCS. MOLLUSCS INCLUSE MUSSELS, CLAMS, AND OTHER BIVALVES. WATER QUALITY IS AFFECTED BY SEDIMENTATION, EUTROPHICATION, HEAVY METALS, PESTICIDES AND OTHER TOXICANTS. THE STUDIES INCLUDE BOTH THE INVESTIGATION OF EFFECTS AND THE SPECIFIC REPORTS FOR IDENTIFIED RIVERS, LAKES AND IMPOUNDMENTS. (CONTAINS 79 CITATIONS FULLY INDEXED AND INCLUDING A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010131

PUBLICATION DATE: JUN 83

TITLE: FRESH WATER MUSSELS AND WATER QUALITY. 1977-JUNE, 1983 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *AQUATIC ENVIRONMENTS; BIBLIOGRAPHIES; *ENVIRONMENTAL IMPACTS; *FRESH WATER; *MOLLUSCS; *MONITORING; *RESEARCH; *SEDIMENTATION; *TOXIC SUBSTANCES; *WATER QUALITY

DESCRIPTIVE NOTE: 123P. PRICE CODE: PC N01/MF N01. PB83-866806.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE USE OF MOLLUSCS TO MONITOR WATER QUALITY, AND THE EFFECTS OF WATER QUALITY UPON THE DISTRIBUTION AND ABUNDANCE OF MOLLUSCS. MOLLUSCS INCLUDE MUSSELS, CLAMS, AND OTHER BIVALVES. WATER QUALITY IS AFFECTED BY SEDIMENTATION, EUTROPHICATION, HEAVY METALS, PESTICIDES,AND OTHER TOXICANTS. THE STUDIES INCLUDE BOTH THE INVESTIGATION OF EFFECTS AND THE SPECIFIC REPORTS FOR IDENTIFIED RIVERS, LAKES AND IMPOUNDMENTS. (CONTAINS 76 CITATIONS FULLY INDEXED AND INCLUDING A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010132

PUBLICATION DATE: JUN 83

TITLE: LAKE AND RIVER BOTTOM SAMPLING. 1977-JUNE 1983 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE).

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *BOTTOM SAMPLING; *LAKES; *ENVIRONMENTAL IMPACTS; *RESEARCH REPORTS; *RIVERS; *SAMPLING; *WATER QUALITY

DESCRIPTIVE NOTE: 195P. PRICE CODE: PC N02/MF N01. PB83-866764.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS COVERING TECHNIQUES AND RESULTS RELATED TO THE COLLECTION OF SAMPLES FROM THE BOTTOM OF PONDS, LAKES, AND RIVERS. TECHNIQUES INCLUDE SAMPLING DEVICES, PLATFORMS FOR MOUNTING OR OPERATING THE SAMPLING DEVICES, AND ANALYTICAL TECHNIQUES FOR THE COLLECTED SAMPLES. RESULTS INCLUDE FINDINGS OF ORGANIC, CHEMICAL AND METALLIC MATERIAL IN THE BOTTOM SEDIMENTS, WITH IN MANY CASES, STATEMENTS ON RESULTING WATER QUALITY OR ENVIRONMENTAL ASPECTS AND THE CAUSES. IN SOME CASES, THE INVESTIGATIONS COVER POROSITY OF BOTTOM SOILS, AND GROUND WATER BENEATH THE LAKE OR RIVER. MANY OF THE SAMPLES INCLUDE BENTHIC FAUNA TO ASSESS THE CONDITION OF THE

WATER. (THIS UPDATED BIBLIOGRAPHY CONTAINS 133 CITATIONS, 51 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010133

PUBLICATION DATE: JUN 83

TITLE: OIL SPILLS: LEGAL ASPECTS. 1977-JUNE, 1983 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *ECONOMICS; *FEDERAL ROLE; *LEGAL ASPECTS; *LEGISLATION; *OIL SPILLS; *REGULATIONS; *STATE ROLE

DESCRIPTIVE NOTE: 200P. PRICE CODE: PC N01/MF N01. PB83-864447.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE LEGAL ASPECTS OF OIL SPILLS. TOPICS INCLUDE GENERAL PERSPECTIVES ON OIL SPILLS, EPA'S RESPONSE TO OIL SPILLS, LEGAL AND CORPORATE RESPONSE TO OIL SPILLS, PUBLIC INTEREST GROUPS' ATTITUDES ON OIL SPILLS, AND ECONOMIC AND POLITICAL APPROACHES TO THE PROBLEMS CAUSED BY OIL SPILLS. FEDERAL, STATE AND LOCAL LEGISLATION DEALING WITH THESE PROBLEMS ARE EMPHASIZED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 150 CITATIONS, 28 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010134

PUBLICATION DATE: MAY 83

TITLE: ON-SITE SEWAGE DISPOSAL: SITE SUITABILITY, SYSTEM SELECTION AND SOIL ABSORPTION AREA SIZING.

PERSONAL AUTHOR: FRITTON, DANIEL D.; AND OTHERS

DESCRIPTOR: *COMPUTER APPLICATIONS; *DECISION MAKING; *INFORMATION SYSTEMS; *MODELS; *OPERATIONS (WASTEWATER); *ONSITE DISPOSAL; *PERFORMANCE EVALUATION; *SITE SELECTION; *SOIL ABSORPTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 292P. PRICE CODE: PC A12/MF A01. PB83-219725.

ABSTRACT: ESTIMATES OF THE RELIABILITY OF ON-SITE EFFLUENT DISPOSAL SYSTEMS INDICATE THAT LESS THAN 50% PERFORM SATISFACTORILY OVER THEIR DESIGN LIFE. IT IS THE OBJECTIVE OF THIS REPORT TO DESCRIBE A PROTOTYPE COMPUTER INFORMATION DELIVERY SYSTEM DEVELOPED TO IMPROVE SITE SUITABILITY DECISION MAKING, ON-SITE EFFLUENT DISPOSAL SYSTEM SELECTION, AND SOIL ABSORPTION AREA SIZING DECISIONS. THE COMPLETED COMPUTER MODEL IS WRITTEN IN THE INTERACTIVE COMPUTER LANGUAGE CALLED APL. IN THE PROCESS OF DEVELOPING THE MODEL, SEVERAL OTHER STUDIES WERE COMPLETED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010135

PUBLICATION DATE: JUN 83

TITLE: TREATMENT FOR THE CONTROL OF ORGANIC CHEMICAL CONTAMINATION OF DRINKING WATER: COST AND PERFORMANCE.

PERSONAL AUTHOR: CLARK, ROBERT M.; ELIERS, RICHARD G.

DESCRIPTOR: *CONTROL TECHNOLOGY; *CONTAMINATION; *COSTS; *DRINKING WATER; *GROUNDWATER; *OPERATIONS (WATER); *ORGANIC CHEMICALS; *PERFORMANCE EVALUATION; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 38P. PRICE CODE: PC A03/MF A01. PB83-219392.

ABSTRACT: THERE IS GROWING CONCERN OVER THE QUALITY OF THE NATIONS GROUND WATER RESOURCES. INSTANCES OF GROUND WATER CONTAMINATION FROM ORGANIC CHEMICALS HAVE CREATED A NEED TO IDENTIFY ALTERNATIVE TECHNOLOGIES FOR ADEQUATE REMOVAL OF ORGANIC CHEMICALS AND TO DETERMINE RELATIVE COSTS ASSOCIATED WITH NECESSARY TREATMENT. THIS PAPER DISCUSSES SEVERAL CONTROL TECHNOLOGY OPTIONS AVAILABLE TO TREAT GROUND WATER FOR ORGANIC CHEMICAL CONTAMINATION. A COST AND PERFORMANCE ANALYSIS IS PRESENTED IN ORDER TO GUIDE THE SELECTION OF CONTROL TECHNOLOGIES FOR THREE MAJOR CONTAMINANTS: TRICHLOROETHYLENE; TETRACHLORETHYLENE; 1,1,1-TRICHLORETHANE. IN ALL CASES AERATION IS THE CHEAPEST ALTERNATIVE FOR TREATMENT. IF ADSORPTION IS REQUIRED, HOME UNITS MAY PROVE TO BE CHEAPER THAN CENTRAL ADSORPTION TREATMENT (GAC).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010136

PUBLICATION DATE: 83

TITLE: COPPER PROCEDURES - 8026.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *COPPER; *LABORATORY PROCEDURES; *SEA WATER; *WASTEWATER; *WATER

DESCRIPTIVE NOTE: 13P.

ABSTRACT: DESCRIBED ARE ANALYTICAL PROCEDURES FOR DETERMINING THE AMOUNT OF COPPER IN WATER, WASTEWATER, AND SEA WATER. ALSO DISCUSSED ARE SAMPLING AND CHEMICAL HANDLING.

AVAILABILITY: HACE COMPANY, P. O. BOX 389, LOVELAND, CO 80539

IRIS ACCESSION NUMBER: EW010137

PUBLICATION DATE: SEP 83

TITLE: STRATEGIC FINANCIAL PLANNING.

PERSONAL AUTHOR: NOLAN, ROBERT B., JR.; FORAN, ROBERT E.

DESCRIPTOR: *FINANCES; *PLANNING; *UTILITIES; *WATER RESOURCES; *WATER UTILITIES

DESCRIPTIVE NOTE: 436-440P.

ABSTRACT: WATER UTILITIES CANNOT RELY ON TRADITIONAL METHODS OF FINANCING DEBT FOR CAPITAL PROJECTS IN TODAY'S VOLATILE FINANCIAL MARKETS. CAPITAL IMPROVEMENT PLANS SHOULD INCORPORATE THE FLEXIBILITY NEEDED TO TAKE ADVANTAGE OF OPPORTUNITIES IN CHANGING MARKETS, THUS ALLOWING PUBLICLY OWNED WATER UTILITIES TO MAXIMIZE THEIR FINANCIAL RESOURCES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N9

IRIS ACCESSION NUMBER: EW010138

PUBLICATION DATE: SEP 83

TITLE: TRENDS IN THE REAL PRICE OF WATER.

PERSONAL AUTHOR: MANN, PATRICK C.; LEFRANCOIS, PAUL R.

DESCRIPTOR: *COSTS; *ECONOMICS; *FINANCES; *WATER RATES; *TRENDS; *WATER; *WATER SUPPLY

DESCRIPTIVE NOTE: 441-443P.

ABSTRACT: INCREASES IN WATER RATES HAVE TENDED TO LAG BEHIND THE RATE OF INFLATION DURING THE PAST TWO DECADES ACCORDING TO A STUDY OF 152 WATER UTILITIES. THE REAL PRICE OF WATER, WHEN ADJUSTED FOR INFLATION, IS LESS, IN MANY CASES, THAN DURING THE 1960'S.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N9

IRIS ACCESSION NUMBER: EW010139

PUBLICATION DATE: SEP 83

TITLE: BASE-EXTRA CAPACITY WATER RATE DESIGN.

PERSONAL AUTHOR: BANKER, R. F.; COSTANZA, FRANK B.

DESCRIPTOR: *COSTS; *WATER RATES; *WATER SERVICE; *WATER UTILITIES

DESCRIPTIVE NOTE: 444-449P.

ABSTRACT: INCREASED EMPHASIS IS BEING PLACED ON DEVELOPING WATER RATES THAT REFLECT THE COSTS OF PROVIDING WATER SERVICE. THE PRINCIPLES AND PHILOSOPHY OF ONE COST-ALLOCATION METHOD ARE DISCUSSED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N9

IRIS ACCESSION NUMBER: EW010140

PUBLICATION DATE: SEP 83

TITLE: INDEXING WATER RATES.

PERSONAL AUTHOR: ADAMS, ARTHUR H.; VOGLER, GREGORY J.

DESCRIPTOR: *COSTS; *OPERATING EXPENSES; *WATER RATES; *WATER RATE INDEXING; *WATER SUPPLY

DESCRIPTIVE NOTE: 450-453P.

ABSTRACT: INDEXING WOULD ALLOW WATER RATES TO MOVE UP OR DOWN IN RESPONSE TO CHANGES IN THE COST OF PROVIDING SERVICE. ALTHOUGH INDEXING TECHNIQUES HAVE NOT BEEN APPLIED TO WATER RATES, THEY ARE USED IN THE ELECTRIC UTILITY INDUSTRY AND COULD PROVIDE A METHOD OF GENERATING ADEQUATE WATER REVENUES, PARTICULARLY DURING PERIODS OF INFLATION.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N9

IRIS ACCESSION NUMBER: EW010141

PUBLICATION DATE: SEP 83

TITLE: FINANCING WATER UTILITY IMPROVEMENTS.

PERSONAL AUTHOR: MCKINLEY, J. ROWE

DESCRIPTOR: *CAPITAL IMPROVEMENTS; *DEBT FINANCING; *FINANCING; *PLANNING; *WATER RATES; *WATER UTILITIES

DESCRIPTIVE NOTE: 454-457P.

ABSTRACT: SOME OF THE NEW INSTRUMENTS FOR FINANCING WATER UTILITY IMPROVEMENTS ARE REVIEWED IN THE CONTEXT OF MASTER PLANNING, FEES FOR NEW CONNECTIONS, AND WATER RATE STRUCTURES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N9

IRIS ACCESSION NUMBER: EW010142

PUBLICATION DATE: SEP 83

TITLE: EFFECTS OF HOLDING TIME AND TEMPERATURE ON COLIFORM NUMBERS IN DRINKING WATER.

PERSONAL AUTHOR: MCDANIELS, AUDREY E.; BORDNER, ROBERT H.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *COLIFORMS; *DRINKING WATER; *LABORATORY PROCEDURES; *REGULATIONS; *RESEARCH REPORTS; *SAMPLING; *WATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 458-463P.

ABSTRACT: THE PURPOSE OF THIS STUDY WAS TO INVESTIGATE SAMPLE-HOLDING EFFECTS BY USING CURRENT METHODOLOGY AND TO SUPPLY RELIABLE DATA FOR FUTURE REVISIONS IN DRINKING WATER REGULATIONS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N9

IRIS ACCESSION NUMBER: EW010143

PUBLICATION DATE: SEP 83

TITLE: MEHTODS FOR TESTING THE EFFICACY OF ULTRAVIOLET LIGHT DISINFECTION DEVICES IN DRINKING WATER.

PERSONAL AUTHOR: TOBIN, R. S.; AND OTHERS

DESCRIPTOR: *DISINFECTION; *DRINKING WATER; *EQUIPMENT; *ONSITE DISINFECTION; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *ULTRAVIOLET RADIATION; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 481-484P.

ABSTRACT: THE PURPOSE OF THIS RESEARCH WAS TO ESTABLISH A METHOD TO DETERMINE THE ACTIVATION THRESHOLD OF ULTRAVIOLET FAIL-SAFE DEVICES. A SECOND OBJECTIVE WAS TO DETERMINE WHETHER THIS ACTIVATION THRESHOLD DOSAGE PROVIDED AN ADEQUATE MICROBIAL REDUCTION.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N9

IRIS ACCESSION NUMBER: EW010144

PUBLICATION DATE: SEP 83

TITLE: CERTIFICATION UNCERTAINTIES.

PERSONAL AUTHOR: FLYNN, KEVIN C.

DESCRIPTOR: ABC; *CERTIFICATION; *OPERATOR CERTIFICATION; *OPERATOR TRAINING; *RECIPROCITY; STATE ROLE; *TRAINING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1128-1131P.

ABSTRACT: PROBLEMS RELATED TO CERTIFICATION OF WASTEWATER TREATMENT OPERATORS ARE DISCUSSED. INCLUDED ARE LACK OF CERTIFICATION IN SOME AREAS AND LACK OF SUFFICIENT RECIPROCITY AGREEMENTS AMONG STATES. IN ADDITION, CERTIFICATION OF WORKERS IN OTHER WASTEWATER JOBS IS RECEIVING ATTENTION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N9

IRIS ACCESSION NUMBER: EW010145

PUBLICATION DATE: SEP 83

TITLE: A QUALITY ASSURANCE PROGRAM AT A MUNICIPAL WASTEWATER TREATMENT PLANT LABORATORY.

PERSONAL AUTHOR: ALDENHOFF, GLORIA A.; ERNEST, LAWRENCE A.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *EVALUATION; *LABORATORY PROCEDURES; *MANAGEMENT; *PERFORMANCE EVALUATION; *QUALITY ASSURANCE; *QUALITY CONTROL; *WASTEWATER TREATMENT; *WISCONSIN

DESCRIPTIVE NOTE: 1132-1137P.

ABSTRACT: QUALITY ASSURANCE INVOLVES EVERY ASPECT OF LABORATORY OPERATION AND REQUIRES THE COMMITMENT OF THE ENTIRE LABORATORY STAFF. DESCRIBED IS THE QUALITY ASSURANCE PROGRAM OF THE MILWAUKEE METROPOLITAN SEWERAGE DISTRICT. CONSIDERED ARE PRECISION, ACCURACY, CONTROL CHARTS, AND PROCEDURES USED RELATED TO EACH.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N9

IRIS ACCESSION NUMBER: EW010146

PUBLICATION DATE: SEP 83

TITLE: COMPREHENSIVE PROGRAM FOR SURVEILLANCE OF PACKAGE PLANTS AND STABILIZATION PONDS.

PERSONAL AUTHOR: WEIGAND, RICHARD G.

DESCRIPTOR: *DESIGN; *CONSTRUCTION; *FACILITIES; *INSPECTION; *MAINTENANCE; *OPERATIONS (WASTEWATER); *OPERATOR TRAINING; *PACKAGE PLANTS; *REGULATIONS; *RURAL AREAS; *SURVEILLANCE; *TECHNICAL ASSISTANCE; *TRAINING; *WASTEWATER TREATMENT; *STABILIZATION PONDS; *WEST VIRGINIA

DESCRIPTIVE NOTE: 1138-1143P.

ABSTRACT: TECHNICAL ASSISTANCE HAS BEEN MUCH MORE SUCCESSFUL THAN THE THREAT OF ENFORCEMENT ACTION IN OBTAINING COMPLIANCE WITH STATE REGULATIONS. DESCRIBED IS A SURVEILLANCE PROGRAM DEVELOPED BY A COUNTY IN WEST VIRGINIA TO DEAL WITH SMALL WASTEWATER TREATMENT SYSTEMS, PRIMARILY STABILIZATION POND SYSTEMS AND PACKAGE PLANTS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N9

IRIS ACCESSION NUMBER: EW010147

PUBLICATION DATE: SEP 83

TITLE: INEXPENSIVE HEAVY METAL REMOVAL BY FOAM FLOTATION.

PERSONAL AUTHOR: MCINTYRE, GREGORY; AND OTHERS

DESCRIPTOR: *CHROMIUM; *COPPER; *COSTS; *HEAVY METALS; *METALS; *PERFORMANCE EVALUATION; *RECOMMENDATIONS; *RESEARCH REPORTS; *WASTE REMOVAL; *WASTEWATER TREATMENT; *ZINC

DESCRIPTIVE NOTE: 1144-1149P.

ABSTRACT: CHEMICAL COSTS FOR HEAVY METAL REMOVAL ARE HIGHER THAN LIME PRECIPITATION, BUT ARE OUTWEIGHED BY THE HIGHER LOADING RATES THAN CAN BE ACHIEVED. METALS STUDIED WERE COPPER, ZINC, AND CHROMIUM.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N9

IRIS ACCESSION NUMBER: EW010148

PUBLICATION DATE: SEP 83

TITLE: NITROGEN CONTROL IN DOMESTIC WASTEWATER RAPID INFILTRATION SYSTEMS.

PERSONAL AUTHOR: LEACH, LOWELL E.; ENFIELD, CARL G.

DESCRIPTOR: *DOMESTIC WASTEWATER; *NITROGEN; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1150-1157P.

ABSTRACT: ONE-DAY FLOODING AND DRYING CYCLES WERE THE MOST EFFICIENT OF THE FOUR OPERATING SCHEDULES STUDIED FOR NITROGEN CONTROL IN DOMESTIC WASTEWATER RAPID INFILTRATION SYSTEMS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N9

IRIS ACCESSION NUMBER: EW010149

PUBLICATION DATE: SEP 83

TITLE: APPLICATION OF AN OZONE DISINFECTION MODEL FOR MUNICIPAL WASTEWATER EFFLUENTS.

PERSONAL AUTHOR: MECKES, MARK C.; AND OTHERS

DESCRIPTOR: *DESIGN; *DISINFECTION; *EQUIPMENT; *FACILITIES; MODELS; *OZONATION; *RECOMMENDATIONS; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1158-1162P.

ABSTRACT: COLIFORM DENSITIES IN OZONATED MUNICIPAL EFFLUENTS CAN BE CONFIDENTLY PREDICTED FOR PLANTS NOT RECEIVING INDUSTRIAL WASTES. IF A TREATMENT PLANT BEING DESIGNED WILL BE REASONABLY FREE OF INDUSTRIAL EFFLUENTS, THE MODEL DISCUSSED MAY BE USEFUL FOR THE PROPER SIZING OF OZONATION EQUIPMENT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N9

IRIS ACCESSION NUMBER: EW010150

PUBLICATION DATE: SEP 83

TITLE: METALS REMOVALS AND PARTITIONING IN CONVENTIONAL WASTEWATER TREATMENT PLANTS.

PERSONAL AUTHOR: PETRASEK, ALBERT C., JR.; KUGELMAN, IRWIN J.

DESCRIPTOR: *INDUSTRIAL WASTES; *METALS; *METAL REMOVAL; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PILOT STUDIES; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1183-1190P.

ABSTRACT: A PILOT STUDY WAS CONDUCTED TO DETERMINE CONCENTRATION OF METALS IN WASTEWATER TREATMENT. THE RELATIVE CONCENTRATION FOUND IN WASTE ACTIVATED SLUDGE WAS TWO TO FIVE TIMES GREATER THAN THAT IN THE PRIMARY SLUDGE. THE AVERAGE REMOVAL OF THE 13 METALS STUDIED WAS 42%, BASED ON THE MASS BALANCE CALCULATIONS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N9

IRIS ACCESSION NUMBER: EW010151

PUBLICATION DATE: SEP 83

TITLE: A PRACTICAL METHOD TO ESTIMATE THE ACETOCLASTIC METHANOGENIC BIOMASS IN ANAEROBIC SLUDGES.

PERSONAL AUTHOR: VALCKE, D.; VERSTRAETE, W.

DESCRIPTOR: *ANAEROBIC DIGESTION; *ANALYTICAL TECHNIQUES; *ACETOCLASTIC METHANOGENS; *LABORATORY PROCEDURES; *METHANE DIGESTION; *MONITORING; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1191-1195P.

ABSTRACT: THE PROPOSED TEST CAN BE A USEFUL TOOL FOR CONTROLLING ANAEROBIC DIGESTERS, ESPECIALLY THOSE OPERATING WITH A PRIMARILY ACETATE SUBSTANCE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N9

IRIS ACCESSION NUMBER: EW010152
PUBLICATION DATE: SEP 83

TITLE: CITY IMPROVES CONTROL OVER SEWER LINE ROOT INTRUSION.

PERSONAL AUTHOR: WALL, W. DEAN

DESCRIPTOR: *EQUIPMENT; *MAINTENANCE; *SEWERS; *TREE ROOTS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 72-73P.

ABSTRACT: A COMBINATION SEWER JET AND VACUUM SPEEDS SEWER MAINTENANCE WORK AND IS EFFECTIVE WITH ROOT INTRUSIONS.

AVAILABILITY: PUBLIC WORKS; V114 N9

IRIS ACCESSION NUMBER: EW010153

PUBLICATION DATE: SEP 83

TITLE: INSTRUMENT MAINTENANCE UPS PLANT EFFICIENCY BY 25 PERCENT.

PERSONAL AUTHOR: CHACEY, ROBERT D.; FOREMAN, ARCH

DESCRIPTOR: *CONTRACT MAINTENANCE; *INSTRUMENTATION; *MAINTENANCE; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 80-83P.

ABSTRACT: THE USE OF CONTRACT MAINTENANCE AND CALIBRATION OF PROCESS CONTROL INSTRUMENTATION RESULTED IN IMPROVED PERFORMANCE AT AN ADVANCED WASTEWATER TREATMENT PLANT.

AVAILABILITY: PUBLIC WORKS; V114 N9

IRIS ACCESSION NUMBER: EW010154

PUBLICATION DATE: SEP 83

TITLE: DETERMINING THE SLUDGE COMPOST MARKET FOR A CITY.

PERSONAL AUTHOR: LEWIS, WILLIAM R.; AND OTHERS

DESCRIPTOR: *COMPOST; *ECONOMICS; *MARKETING; *SLUDGE; *SURVEYS: *WASTE DISPOSAL

DESCRIPTIVE NOTE: 86-87P.

ABSTRACT: TO BE ECONOMICALLY VIABLE, A SEWAGE SLUDGE COMPOST PROJECT MUST HAVE A MARKET FOR THE PRODUCT. THIS EXPLAINS HOW A STUDY WAS CONDUCTED.

AVAILABILITY: PUBLIC WORKS; V114 N9

IRIS ACCESSION NUMBER: EW010155
PUBLICATION DATE: SEP 83

TITLE: COMPUTERIZED SEWER SYSTEM EVALUATION.

DESCRIPTOR: *COMPUTER APPLICATIONS; *COSTS; *EVALUATION; *INFILTRATION; *INFLOW; *INSPECTION; *MAINTENANCE; *MONITORING; *REHABILITATION; *SEWERS; *SURVEYS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 89-91,121P.

ABSTRACT: DESCRIBED IS A SEWER SYSTEM EVALUATION AIDED BY A COMPUTER TO DETERMINE THE COST-EFFECTIVENESS OF AN INFILTRATION/INFLOW REDUCTION PROGRAM.

AVAILABILITY: PUBLIC WORKS; V114 N9

IRIS ACCESSION NUMBER: EW010156

PUBLICATION DATE: SEP 83

TITLE: A CHLORINE GAS CLOUD FROM SODIUM HYPOCHLORITE?

PERSONAL AUTHOR: BROWER, GEORGE R.

DESCRIPTOR: *ACCIDENT PREVENTION; *CHEMICALS; *CHEMICAL HANDLING; *SAFETY; *WATER TREATMENT

DESCRIPTIVE NOTE: 91-92P.
ABSTRACT: THE GENERATION OF CHLORINE GAS BY THE ACCIDENTAL ADDITION OF FERRIC CHLORIDE TO A TANK OF SODIUM HYPOCHLORITE UNDERSCORES THE NEED FOR CHEMICAL HANDLING PRECAUTIONS.

AVAILABILITY: PUBLIC WORKS; V114 N9

IRIS ACCESSION NUMBER: EW010157

PUBLICATION DATE: SEP 83

TITLE: NATION'S LARGEST PIPE RELINING PROJECT.

DESCRIPTOR: *INSITUFORM; *MAINTENANCE; *PIPES; *PIPE RELINING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 96-97P.

ABSTRACT: REPAIR OF INACCESSIBLE LEAKING PIPES AT A WASTEWATER TREATMENT PLANT RESULTED IN THE LARGEST INSITUFORM LINING EVER INSTALLED IN THE U.S.

AVAILABILITY: PUBLIC WORKS; V114 N9

IRIS ACCESSION NUMBER: EW010158

PUBLICATION DATE: 83

TITLE: WATER TREATMENT PLANT OPERATION. VOLUME 1. A FIELD STUDY TRAINING PROGRAM.

PERSONAL AUTHOR: KERRI, KEN

DESCRIPTOR: CHEMICAL ANALYSIS; *DRINKING WATER; FACILITIES; *LABORATORY PROCEDURES; POSTSECONDARY EDUCATION; SAFETY; SLUDGE; WATER; *WATER QUALITY; WATER RESOURCES; *WATER TREATMENT; *INSTRUCTIONAL MATERIALS; *OPERATIONS WATER; *CORRESPONDENCE COURSES

DESCRIPTIVE NOTE: 682P.

ABSTRACT: THIS 10-CHAPTER VOLUME CONTAINS INFORMATION ON: WHAT WATER TREATMENT PLANT OPERATORS DO; HOW TO MANAGE RESERVOIRS AND INTAKE STRUCTURES; HOW TO OPERATE AND MAINTAIN COAGULATION, FLOCCULATION, SEDIMENTATION, AND FILTRATION WATER TREATMENT PROCESSES; DISINFECTION OF WATER; PROCEDURES FOR CONTROLLING CORROSION; TECHNIQUES FOR IDENTIFYING THE CAUSES OF TASTE AND ODOR PROBLEMS AND SUGGESTIONS FOR CORRECTING SUCH PROBLEMS; PROCEDURES FOR OPERATING, MAINTAINING, AND ADMINISTRATING A WATER TREATMENT PLANT; AND BASIC LABORATORY PROCEDURES. OBJECTIVES, GLOSSARY, LESSONS, QUESTIONS (WITH SUGGESTED ANSWERS), AND TEST ARE PROVIDED FOR EACH CHAPTER. FINAL EXAMINATION (WITH ANSWERS), SOLVING WATER TREATMENT PLANT ARITHMETIC PROBLEMS, WATER ABBREVIATIONS, COMPLETE GLOSSARY, AND SUBJECT INDEX ARE PROVIDED IN AN APPENDIX. PROGRAM SCOPE/SEQUENCE AND INSTRUCTIONS TO PARTICIPANTS IN HOME-STUDY COURSES ARE PROVIDED IN THE INTRODUCTION.

AVAILABILITY: KEN KERRI, CALIFORNIA STATE UNIV., 6000 "J" STREET, SACRAMENTO, CA 95819

IRIS ACCESSION NUMBER: EW010159

PUBLICATION DATE: JUN 82

TITLE: DIAGNOSTIC OPERATIONAL FOR MODELING PROGRAMS FOR MUNICIPAL WASTEWATER TREATMENT PLANTS FIELD EVALUATION AND PROCESS REVIEW PROJECT

PERSONAL AUTHOR: SULLIVAN, DAVID L.; MONIER, ROY M.

DESCRIPTOR: *COMPUTER APPLICATIONS; *DIAGNOSTIC PROCEDURES; *FACILITIES; *MODELS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PROCESS DESCRIPTIONS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 140P. PRICE: $1.00 PER DOCUMENT PLUS $0.03 PER PAGE.

ABSTRACT: THE PROJECT IN THIS REPORT WAS UNDERTAKEN IN ORDER TO PROVIDE EPA REGION 10 WITH EASILY APPLIED USER ORIENTED COMPUTER PROGRAMS BASED ON ES ENVIRONMENTAL SERVICES, INC. METHODOLOGIES WHICH WOULD RAPIDLY AND ACCURATELY PREDICT TREATMENT PLANT PERFORMANCE CAPABILITIES AND PROCESS PARAMETERS UNDER A VARIETY OF OPERATING CONDITIONS. THE PROJECT INVOLVED DIAGNOSTIC COMPUTER MODELING AND ONSITE FIELD EVALUATION OF 15 MUNICIPAL TREATMENT PLANTS IN REGION 10 TO VERIFY THE ACCURACY OF THE PROGRAMS. THE RESULTS OF THE FIELD VALIDATION HAVE SHOWN THE METHODOLOGIES ARE ACCURATE UNDER NORMAL OPERATING CONDITIONS. CHAPTERS INCLUDE (1) INTRODUCTION, (2_ SUMMARY AND CONCLUSIONS, (3) DIAGNOSTIC EVALUATIONS, (4) PROCESS ANALYSES AND (5) APPENDICES.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW010160

PUBLICATION DATE: SEP 83

TITLE: CERTIFYING WATER/WASTEWATER CONSTRUCTION INSPECTORS.

PERSONAL AUTHOR: BROWN, JACK

DESCRIPTOR: *CERTIFICATION; *CONSTRUCTION; *FACILITIES; *INSPECTION; *INSPECTORS; *EXAMINATIONS; *NATIONAL FOREST SERVICE; *TRAINING PROGRAMS; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 42P.

ABSTRACT: DESCRIBED IS A TRAINING PROGRAM AND EVALUATION PROGRAM FOR CERTIFYING WATER AND WASTEWATER CONSTRUCTION INSPECTORS. THE EXAMINATION IS BASED ON A JOB INVENTORY AND JOB PERFORMANCE REQUIREMENTS. THE TEST WAS VALIDATED WITH CONSTRUCTION INSPECTORS IN THE NATIONAL FOREST SERVICE.

AVAILABILITY: POLLUTION ENGINEERING; V15 N9

IRIS ACCESSION NUMBER: EW010161

PUBLICATION DATE: SEP 83

TITLE: EFFECTS OF INDUSTRIAL BOILER BLOWDOWN DISCHARGES ON STREAMS.

PERSONAL AUTHOR: SPANGLER, JAMES C.

DESCRIPTOR: *BOILERS; *BOILER DISCHARGES; *EFFLUENTS; *INDUSTRIAL BOILER BLOWDOWN; *MONITORING; *STREAMS; *WATER POLLUTION; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 44-45P.

ABSTRACT: DISCUSSED IS THE EFFECT OF BOILER BLOWDOWN ON STREAMS. BOILER DISCHARGES CAN BE HAZARDOUS AND SPECIFIC PARAMETERS SHOULD BE PLACED ON IT. AMONG ITEMS FOR MONITORING ARE: BIOCHEMICAL OXYGEN DEMAND, TOTAL SUSPENDED SOLIDS, TOTAL DISSOLVED SOLIDS, PH, SULFITES, CHEMICAL OXYGEN DEMAND, SETTLEABLE SOLIDS, AMMONIA, OIL AND GREASE AND SULFATES.

AVAILABILITY: POLLUTION ENGINEERING; V15 N9

IRIS ACCESSION NUMBER: EW010162
PUBLICATION DATE: SEP 83

TITLE: DUAL SYSTEMS BEST FOR DUAL WASTES.

PERSONAL AUTHOR: MCINTYRE, JAMES P.

DESCRIPTOR: *DUAL SYSTEMS; *FACILITIES; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); *OILY WASTES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 46-48P.

ABSTRACT: DESCRIBED IS A DUAL SYSTEM FOR TREATING INDUSTRIAL WASTEWATERS. ONE PLANT TREATS OILY WASTE AND THE OTHER PLANT HANDLES A GENERALIZED WASTE STREAM. WASTES PROCESSED ARE RECEIVED FROM A NUMBER OF AUTOMOTIVE MANUFACTURING PLANTS.

AVAILABILITY: POLLUTION ENGINEERING; V15 N9

IRIS ACCESSION NUMBER: EW010163

PUBLICATION DATE: SEP 83

TITLE: ODOR CONTROL FOR SLUDGE DRYERS.

PERSONAL AUTHOR: CROSS, FRANK L., JR.; SCHIFFTNER, KENNETH C.

DESCRIPTOR: *DESIGN; *EQUIPMENT; *ODORS; *ODOR CONTROL; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 50-51P.

ABSTRACT: DISCUSSED ARE ODORS AND ODOR CONTROL FOR WASTEWATER TREATMENT PLANT SLUDGE DRYERS.

AVAILABILITY: POLLUTION ENGINEERING; V15 N9

IRIS ACCESSION NUMBER: EW010164

PUBLICATION DATE: SEP 83

TITLE: WET WELLS - CONTROL TREATMENT PROCESS.

PERSONAL AUTHOR: MATTHEWS, DAVID R.

DESCRIPTOR: *AUTOMATION; *EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT; *WET WELLS

DESCRIPTIVE NOTE: 52-53P.

ABSTRACT: DESCRIBED IS A METHOD OF AUTOMATION DEVELOPED FOR WASTEWATER TREATMENT PLANTS. THE WET WELL CONTROL METHOD ELIMINATES MANY OF THE SOURCES OF IRRITATION WITH AUTOMATION EQUIPMENT AND THE PROBLEM OF RECIRCULATION.

AVAILABILITY: POLLUTION ENGINEERING; V15 N9

IRIS ACCESSION NUMBER: EW010165
PUBLICATION DATE: 83

TITLE: 1983-84 TECHNOLOGY TRANSFER DIRECTORY OF PEOPLE.

PERSONAL AUTHOR: JOLLY, JAMES A.; CREIGHTON, J. W.

DESCRIPTOR: *CONSULTANTS; *DIRECTORIES; *TECHNOLOGY; *TECHNOLOGY TRANSFER

DESCRIPTIVE NOTE: 55P.

ABSTRACT: THIS IS THE FIFTH ISSUE OF A DIRECTORY OF PEOPLE INVOLVED IN TECHNOLOGY TRANSFER. INCLUDED ARE MANY AREAS OF EXPERTISE AND PEOPLE WITH A VARIETY OF OCCUPATIONS. PEOPLE ARE LISTED IN ALPHABETICAL ORDER AND AN INDEX IS PROVIDED FOR EXPERTISE.

AVAILABILITY: U.S. DEPARTMENT OF COMMERCE, MINORITY BUSINESS DEVELOPMENT AGENCY, INDUSTRIAL COMMERCIALIZATION PROJECT, TECTRA, SBPA ROOM 2031, CALIFORNIA STATE UNIVERSITY, SACRAMENTO, CA 95819

IRIS ACCESSION NUMBER: EW010166

PUBLICATION DATE: 83

TITLE: REMEDIAL ACTION TECHNOLOGY FOR WASTE DISPOSAL SITES.

PERSONAL AUTHOR: ROGOSHEWSKI, P.; AND OTHERS

DESCRIPTOR: *CLEAN-UP; GROUNDWATER; *HAZARDOUS WASTES; LAND USE LEACHATE; *MANAGEMENT; PIPES; SEWERS; *TECHNOLOGY; *WASTE TREATMENT; *WASTE DISPOSAL; *WASTE DISPOSAL SITES; WATER DISTRIBUTION

DESCRIPTIVE NOTE: 497P. PRICE: $36.00.

ABSTRACT: THIS BOOK DETAILS AVAILABLE TECHNOLOGIES AND DESCRIBES HOW THEY CAN BE SELECTED AND APPLIED FOR THE CLEAN-UP OF DISPOSAL SITES. PARTICULAR EMPHASIS IS GIVEN TO HAZARDOUS WASTE SITES. CHAPTER TOPICS INCLUDE (1) APPLICATION OF REMEDIAL ACTIONS AT WASTE DISPOSAL SITES, (2) SURFACE CONTROLS, (3) GROUNDWATER CONTROLS, (4) LEACHATE COLLECTION AND TREATMENT, (5) GAS MIGRATION CONTROL, (6) DIRECT WASTE TREATMENT METHODS, (7) CONTAMINATED WATER AND SEWER LINES, AND (8) CONTAMINATED SEDIMENTS.

AVAILABILITY: NOYES DATA CORPORATION, MILL ROAD AT GRAND AVENUE, PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW010167

PUBLICATION DATE: JUN 83

TITLE: TOXICITY OF COBALT. 1970-JUNE, 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ANNOTATED

BIBLIOGRAPHIES; BIBLIOGRAPHIES; *COBALT; *ENVIRONMENTAL IMPACT; *POLLUTION; *RESEARCH REPORTS; *STANDARDS; *TOXICITY; *WASTE REMOVAL

DESCRIPTIVE NOTE: 130P. PRICE CODE: PC N01/MF N01. PB83-867424.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION, AND OTHER ADVERSE EFFECTS OF COBALT. THE DETECTION, ANALYTICAL METHODS, AND STANDARDS ARE CONSIDERED, AND METHODS OF REMOVAL FROM THE ENVIRONMENT ARE DISCUSSED. THE EFFECTS ON AQUATIC AND TERRESTRIAL FLORA AND FAUNA, INCLUDING HUMANS, ARE CONSIDERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 79 CITATIONS, 13 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010168

PUBLICATION DATE: JUN 83

TITLE: TOXICITY OF MANGANESE. 1970-JUNE, 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *ENVIRONMENTAL IMPACT; *MANGANESE; *STANDARDS; *TOXICITY; *WASTE REMOVAL

DESCRIPTIVE NOTE: 217P. PRICE CODE: PCN01/MF N01. PB83-867432.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION, AND OTHER HAZARDS AND ADVERSE EFFECTS OF MANGANESE. THE DETECTION, CHARACTERIZATION, ANALYTICAL METHODS, STANDARDS, AND REMOVAL FROM THE ENVIRONMENT ARE CONSIDERED. THESE ASPECTS OF MANGANESE ARE DEALT WITH IN RELATION TO AQUATIC AND TERRESTRIAL FLORA AND FAUNA, INCLUDING MAN. MANGANESE POLLUTION FROM MINING OPERATIONS ARE ALSO DISCUSSED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 137 CITATIONS, 32 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010169

PUBLICATION DATE: JUN 83

TITLE: SALT MARSHES. 1977-JUNE, 1983. (CITATIONS FROM OCEANIC ABSTRACTS).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *BIOLOGY; *ENVIRONMENT; *EROSION; *OIL SPILLS; *RESEARCH REPORTS; *SALT MARSHES

DESCRIPTIVE NOTE: 195P. PRICE CODE: PC N01/MF N01. PB83-867176.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING SALT MARSHES OF THE U.S. EAST COAST. THE FAUNA AND FLORA OF THE MARSHES, AND NITROGEN FIXATION IN SALT MARSHES AND ITS IMPORTANCE ARE DISCUSSED. SEASONAL AND ENVIRONMENTAL VARIATIONS, THE EFFECTS OF OIL SPILLS, AND EROSION OF THE SALT MARSHES ARE ALSO CONSIDERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 192 CITATIONS, 19 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010170

PUBLICATION DATE: JUN 83

TITLE: STRIP MINING: IMPACTS ON WATER RESOURCES. 1977-JUNE, 1983 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *MINING; *RESEARCH REPORTS; *STRIP MINING; *WASTES; *WATER RESOURCES; *WATER POLLUTION

DESCRIPTIVE NOTE: 160P. PRICE CODE: PC N01/MF N01. PB83-867200.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING STRIP MINE WASTES AND THE EFFECT ON WATER RESOURCES. THE STUDIES ARE BOTH GENERAL, INVESTIGATING THE HYDRAULICS OF WASTES AND RUNOFF, AND SPECIFIC, REPORTING ON RESULTS OF SURVEYS AT SOME STRIP MINES. SOME CITATIONS REFERENCE LAND RECLAMATION TECHNIQUES AND EFFORTS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 103 CITATIONS, 45 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010171

PUBLICATION DATE: MAR 83

TITLE: ANALYSIS OF CHLORINATED ORGANIC COMPOUNDS FORMED DURING CHLORINATION OF WASTEWATER PRODUCTS.

PERSONAL AUTHOR: GLAZE, W. H.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHLORINATION; *CHEMICAL BY-PRODUCTS; *DISINFECTION; *NON-VOLATILE COMPOUNDS; *ORGANIC COMPOUNDS; *RESEARCH REPORTS; *VOLATILE COMPOUNDS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB83-144444

ABSTRACT: THIS REPORT DESCRIBES A SERIES OF STUDIES THAT EXAMINED THE CHEMICAL BY-PRODUCTS FORMED DURING THE CHLORINATION OF MUNICIPAL WASTEWATER EFFLUENTS. THE

OBJECTIVES OF THE RESEARCH INCLUDED (1) DEVELOPING SEPARATION TECHNIQUES FOR VOLATILE AND NON-VOLATILE BY-PRODUCTS AND (2) INVESTIGATING THE CHLORINATED BY-PRODUCTS PRODUCED WHEN LARGE DOSES OF CHLORINE WERE USED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010176

PUBLICATION DATE: AUG 83

TITLE: HAZARDOUS WASTE SITES - NATIONAL PRIORITIES LIST.

DESCRIPTOR: *HAZARDOUS WASTES; *HAZARD WASTE SITES; *LAND USE; *POLLUTION; PUBLIC HEALTH; *NATIONAL PRIORITIES LIST; *US EPA; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 64P.

ABSTRACT: THIS PUBLICATION INCLUDES THREE LISTS OF HAZARDOUS WASTE SITES. THESE ARE (1) THE 406 SITES THAT MET THE CRITERIA FOR INCLUSION IN THE CURRENT NATIONAL PRIORITIES LIST (NPL) AS RANKED BY THE EPA, (2) THE 133 SITES ON THE FIRST PROPOSED NPL UPDATE AS RANKED BY EPA AND NPL AND PROPOSED UPDATES SITES ARRANGED BY STATE.

AVAILABILITY: U.S. GOVERNMENT PRINTING OFFICE, SUPERINTENDENT OF DOCUMENTS, WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW010177

PUBLICATION DATE: SEP 83

TITLE: DETERMINATION OF TOTAL CYANIDE IN THIOCYANATE-CONTAINING WASTEWATERS.

PERSONAL AUTHOR: CSIKAI, NICHOLAS J.; BARNARD, A. J.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CYANIDE; *LABORATORY PROCEDURES; *SAMPLING; *WASTEWATER; *WATER QUALITY

DESCRIPTIVE NOTE: 1677-1682P.

ABSTRACT: REPORTED IS A TOTAL CYANIDE PROCEDURE BASED ON THE USE OF EDTA AT PH 4.0, ACETATE BUFFERED TO DISRUPT THE COMPLEXES OF CADMIUM, CHROMIUM, COPPER, IRON, NICKEL AND ZINC. NITRATE INTERFERENCE IS OBVIATED BY ADDING SULFURIC ACID. SULFIDES ARE ALSO REMOVED.

AVAILABILITY: ANALYTICAL CHEMISTRY; V55 N11

IRIS ACCESSION NUMBER: EW010178

PUBLICATION DATE: SEP 83

TITLE: ANAEROBIC BIOTECHNOLOGY FOR INDUSTRIAL WASTEWATER TREATMENT.

PERSONAL AUTHOR: SPEECE, RICHARD E.

DESCRIPTOR: *ANAEROBIC BIOTECHNOLOGY; *ANAEROBIC DIGESTION; *FACILITIES; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 416A-427AP.

ABSTRACT: PRESENTED IS AN OVERVIEW OF THE SCIENTIFIC PRINCIPLES AND TECHNOLOGICAL CONCEPTS AND A DESCRIPTION OF SEVERAL INSTALLATIONS.

AVAILABILITY: ENVIRONMENTAL SCIENCE 8 TECHNOLOGY; V17 N9

IRIS ACCESSION NUMBER: EW010179

PUBLICATION DATE: SEP 83

TITLE: COHESIVENESS SHARPENS MANAGEMENT'S CAPABILITIES.

PERSONAL AUTHOR: HERSCH, PAUL

DESCRIPTOR: *MANAGEMENT; *PERSONNEL; *PLANNING; *PRIVATE UTILITIES; *UTILITIES; *WATER UTILITIES; *WATER TREATMENT

DESCRIPTIVE NOTE: 26,92P.

ABSTRACT: DESCRIBED IS THE MANAGEMENT PROGRAM FOR THE ELIZABETHTOWN WATER CO. IN NEW JERSEY. THE UTILITY IS AN INVESTOR-OWNED UTILITY THAT HAS BEEN VERY SUCCESSFUL.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N10

IRIS ACCESSION NUMBER: EW010180

PUBLICATION DATE: SEP 83

TITLE: GROWING A NEW TREATMENT PLANT FROM OLD ROOTS.

PERSONAL AUTHOR: WILDER, CARLTON S.; JOHNSON, GEORGE

DESCRIPTOR: *CONSTRUCTION; *DESIGN; *GEORGIA; *EFFLUENTS; *FACILITIES; *POLLUTION; *WASTEWATER TREATMENT; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 28-31P.

ABSTRACT: IN KEEPING WITH ITS POSITION AS THE HUB OF THE SOUTHERN AND SOUTHEASTERN SUNBELT, ATLANTA IS ATTACKING THE POLLUTION PROBLEMS THAT HAVE DEGRADED ITS THREE RIVERS. SEVERAL PROJECTS TO IMPROVE THE WATER QUALITY OF THE RIVERS ARE DESCRIBED.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N10

IRIS ACCESSION NUMBER: EW010181
PUBLICATION DATE: SEP 83

TITLE: SIZING UP THE DIGESTION PROCESS QUICKLY.

PERSONAL AUTHOR: CHATTERJEE, K.

DESCRIPTOR: *DETENTION TIME; *DIGESTION; *GAS PRODUCTION; *MANAGEMENT; *OPERATIONS (WASTEWATER); *TOTAL SOLIDS; *TOTAL VOLATILE SOLIDS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 44P.

ABSTRACT: PRESENTED IS A NOMOGRAPH TO DETERMINE TOTAL SOLIDS IN POUNDS, TOTAL VOLATILE SOLIDS IN POUNDS, PERCENTAGE OF SOLIDS, PERCENTAGE OF VOLATILE SOLIDS, GAS PRODUCED IN POUNDS, AND DETENTION TIME.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N10

IRIS ACCESSION NUMBER: EW010182

PUBLICATION DATE: SEP 83

TITLE: TAKING TECHNOLOGY UNDERGROUND.

PERSONAL AUTHOR: YONTS, DON

DESCRIPTOR: *INSPECTION; *MAINTENANCE; *REHABILITATION; *SEWER REPAIR; *SEWERS; *TECHNOLOGY; *TELEVISION; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 47-48P.

ABSTRACT: CREATIVE SOLUTIONS AND NEW TECHNOLOGY ARE BEING COMBINED TO SOLVE THE PROBLEM OF WASTEWATER COLLECTION SYSTEM REPAIR AND REHABILITATION. THE TASK IS BEING HAMPERED BY A TIGHT ECONOMY.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N10

IRIS ACCESSION NUMBER: EW010183

PUBLICATION DATE: SEP 83

TITLE: JOINT EFFORT BREEDS EFFICIENCY.

PERSONAL AUTHOR: BURTON, ABBOTT; JOLLIE, WALTER H.

DESCRIPTOR: *DESIGN; *CONSTRUCTION; *FACILITIES; *ILLINOIS; *JOINT OPERATIONS; *OPERATIONS (WASTEWATER); *REMODELING; *TRAINING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 50,52,98P.

ABSTRACT: A GOVERNMENT/INDUSTRY MARRIAGE PRODUCED A WELL-RUN, EFFICIENT WASTEWATER TREATMENT PLANT AS OFFSPRING. THE FACILITY IN ILLINOIS IS DESCRIBED.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N10

IRIS ACCESSION NUMBER: EW010184

PUBLICATION DATE: SEP 83

TITLE: IT PAYS TO KNOW POWER NEEDS.

PERSONAL AUTHOR: BOYLE, WILLIAM H.; GANNON, RICHARD P.

DESCRIPTOR: *COSTS; *ELECTRICAL ENERGY; *ENERGY NEEDS; *EQUIPMENT; *HEADWORKS; *OPERATIONS (WASTEWATER); *PRIMARY TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 54,56,61P.

ABSTRACT: WHAT DOES IT TAKE TO RUN THE HEADWORKS AND PRIMARY EQUIPMENT OF A WASTEWATER TREATMENT PLANT IN TERMS OF ELECTRICAL ENERGY? THIS ARTICLE PROVIDES INFORMATION ON ELECTRICAL ENERGY REQUIREMENTS FOR TYPICAL HEADWORKS AND PRIMARY TREATMENT FOR 1 MGD TO 50 MGD.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N10

IRIS ACCESSION NUMBER: EW010185

PUBLICATION DATE: SEP 83

TITLE: FLINT FUMES NO LONGER A NUISANCE.

PERSONAL AUTHOR: EWING, WILLIAM C.; GABRIELSE, R. S.

DESCRIPTOR: *MICHIGAN; *ODORS; *ODOR CONTROL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 58-60-61P.

ABSTRACT: ANGRY NEIGHBORS AND A COURT ORDER WERE THE CATALYSTS IN SOLVING AN ODOR PROBLEM AT A MICHIGAN WASTEWATER PLANT. THE ENGINEERING ANSWER CAME WITH THE INSTALLATION OF A NEW ODOR CONTROL SYSTEM.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N10

IRIS ACCESSION NUMBER: EW010186

PUBLICATION DATE: 73

TITLE: WASTEWATER TREATMENT SYSTEMS FOR RURAL COMMUNITIES.

PERSONAL AUTHOR: GOLDSTEIN, STEVEN N.; MOBERG, WALTER J., JR.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *COMMISSION ON RURAL WATER; *CONSTRUCTION; *DESIGN; *FACILITIES; *EQUIPMENT; *OPERATIONS (WASTEWATER); *ONSITE WASTEWATER TREATMENT; *PLANNING; *REFERENCE MATERIALS; *RURAL AREAS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 340P.

ABSTRACT: THIS BOOK IS A GUIDE TO SYSTEMS AND COMPONENTS AVAILABLE FOR TREATING WASTEWATERS IN RURAL AREAS. IT SHOULD ASSIST DESIGNERS AND PLANNERS OF WASTEWATER TREATMENT FACILITIES FOR RURAL COMMUNITIES IN LAYING OUT PRELIMINARY SYSTEM PLANS. WHILE SOME OF THE MATERIAL IS DATED, MANY OF THE IDEAS, TABLES, DIAGRAMS, AND BIBLIOGRAPHIES ARE STILL USEFUL.

AVAILABILITY: NATIONAL DEMONSTRATION WATER PROJECT, 1725 DESALES STREET, N.W., SUITE 402, WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW010187

PUBLICATION DATE: 74

TITLE: O&M GUIDE FOR THE SUPPORT OF RURAL WATER-WASTEWATER SYSTEMS.

DESCRIPTOR: *FACILITIES; *GUIDES; *COSTS; *MANAGEMENT; *MAINTENANCE; *OPERATIONS (WASTEWATER); *OPERATIONS (WATER); *TRAINING; *UTILITIES; *RURAL AREAS; *WATER SUPPLY; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 284P.

ABSTRACT: THIS MANUAL IS INTENDED PRIMARILY AS A GUIDE FOR THE MANAGER OF A SMALL RURAL WATER AND WASTEWATER SYSTEM. THE FOCUS IS ON THINGS THE MANAGER NEEDS TO KNOW IF HE IS TO ASSUME THE RESPONSIBILITY FOR SYSTEM OPERATION. IT GIVES HIM A LOOK AT MANAGEMENT AND ADMINISTRATION, HANDLING OF EQUIPMENT AND PERSONNEL, ESTIMATING COSTS AND BUDGETING, AND SUPERVISING THE TECHNICAL SIDE OF WATER-WASTEWATER SYSTEM OPERATION.

AVAILABILITY: NATIONAL DEMONSTRATION WATER PROJECT, 1725 DESALES STREET, N.W., SUITE 402, WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW010188

PUBLICATION DATE: 78

TITLE: DRINKING WATER SUPPLIES IN RURAL AMERICA.

DESCRIPTOR: *CASE STUDIES; *DRINKING WATER; *FACILITIES; *FINANCING; *PLANNING; *REGULATIONS; *RESEARCH NEEDS; *RURAL AREAS; *WATER RATES; *WATER RESOURCES; *WATER SUPPLY; *TECHNOLOGY

DESCRIPTIVE NOTE: 164P.

ABSTRACT: THE OBJECTIVE OF THIS REPORT WAS TO RAISE ISSUES AND TO IDENTIFY CHOICES RATHER THAN TO PRESENT SOLUTIONS OR CHOOSE AMONG ALTERNATIVES. SPECIFICALLY THE AIMS OF THIS REPORT WERE TO: (1) ASSEMBLE INFORMATION FROM ALL AVAILABLE SOURCES REGARDING RURAL WATER SERVICE NEEDS, PROBLEMS, AND PROGRAM RESPONSIBILITIES; (2) PRESENT THIS KNOWLEDGE IN A FRAMEWORK THAT IS COMPREHENSIVE AND BALANCED; (3) IDENTIFY GAPS OF KNOWLEDGE AND MAJOR ISSUES THAT NEED TO BE ADDRESSED; AND (4) SET THE STAGE FOR FURTHER RESEARCH. CHAPTERS ARE INCLUDED ON EXISTING RURAL WATER FACILITIES, WATER RATES IN RURAL AREAS, THE IMPORTANCE OF WATER FACILITIES TO RURAL COMMUNITIES, CURRENT EFFORTS TO PROVIDE ADEQUATE RURAL WATER SERVICE, PROBLEMS IN RURAL WATER DEVELOPMENT, AND FUTURE OPTIONS FOR DEALING WITH RURAL WATER PROBLEMS.

AVAILABILITY: NATIONAL DEMONSTRATION WATER PROJECT, 1725 DESALES STREET, N.W., SUITE 402, WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW010189

PUBLICATION DATE: 76

TITLE: THE COST OF SUPPORTING RURAL WATER SYSTEMS - PROJECTIONS AND POLICIES.

PERSONAL AUTHOR: MOBERG, WALTER J., JR.

DESCRIPTOR: *ADMINISTRATION; *CASE STUDIES; *COSTS; *EQUIPMENT; *FINANCING STRATEGIES; *LABOR; *MAINTENANCE; *MANAGEMENT; *PLANNING; *POLICIES; *REGIONAL PLANNING; *RURAL AREAS; *WATER SUPPLY; *WATER SYSTEMS

DESCRIPTIVE NOTE: 124P.

ABSTRACT: THIS BOOK CONSISTS OF A TECHNICAL STUDY OF THE ACTIVITIES AND COSTS INVOLVED IN SUPPORT OF RURAL WATER SYSTEMS AND AN EXPLORATION OF THE POLICY IMPLICATIONS FOR SUPPORT OF RURAL WATER SYSTEMS THAT SHOULD BE DRAWN FROM THE TECHNICAL STUDY. THE INTRODUCTION DESCRIBES THE METHODOLOGY USED AND SUMMARIZES THE BASIC FINDINGS. THE TECHNICAL STUDY IS BASED ON EXTENSIVE FIELD WORK DONE IN THE STATES OF NEW MEXICO, FLORIDA, AND VIRGINIA. WHILE COSTS HAVE CHANGED SINCE THE STUDY WAS COMPLETED, PROCEDURES, TASKS, AND PRINCIPLES ARE STILL USEFUL.

AVAILABILITY: NATIONAL DEMONSTRATION WATER PROJECT, 1725 DESALES STREET, N.W., SUITE 402, WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW010190

PUBLICATION DATE: 79

TITLE: A GROUND-WATER QUALITY ATLAS OF THE UNITED STATES.

PERSONAL AUTHOR: PETTYJOHN, WAYNE A.; AND OTHERS

DESCRIPTOR: *GROUNDWATER; *HARDNESS; *HYDROGEOLOGY; *MAPS; *MINERALS; *STATE DATA; *SURVEYS; *WATER CHARACTERISTICS; *WATER QUALITY; *WATER SUPPLY; *WATER RESOURCES

DESCRIPTIVE NOTE: 272P.

ABSTRACT: THIS BOOK IS A MAPPING OF GROUND WATER QUALITY PATTERNS ON A STATE-BY-STATE BASIS. CONTENTS INCLUDE A DISCUSSION OF METHODOLOGY, GROUNDWATER REGIONS, AND HYDROGEOLOGY AND WATER QUALTIY BY STATE. DATA FOR STATES ARE LISTED IN ALPHABETICAL ORDER AND INCLUDE STATE MAPS, A

DISCUSSION OF THE STATE, AND TABLES OF SELECTED WATER CHARACTERISTICS.

AVAILABILITY: NATIONAL DEMONSTRATION WATER PROJECT, 1725 DESALES STREET, N.W., SUITE 402, WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW010191

PUBLICATION DATE: JUL 82

TITLE: WATER AND HUMAN HEALTH.

PERSONAL AUTHOR: MCJUNKIN, F. EUGENE

DESCRIPTOR: *DISEASES; *HEALTH; *HYGIENE; *PUBLIC HEALTH; *WATERBORNE DISEASES; *WATER SUPPLY; *WATER TREATMENT; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 143P.

ABSTRACT: THIS VOLUME IS INTENDED TO PROVIDE AN OVERVIEW OF THE RELATIONSHIP BETWEEN WATER AND HUMAN HEALTH. THE PRIMARY FOCUS IS ON WATER AND HEALTH IN THE DEVELOPING WORLD AS INFLUENCED BY PROVISION OF SAFE, ADEQUATE, ACCESSIBLE, AND RELIABLE DRINKING WATER SUPPLIES. ATTENTION IS ALSO GIVEN TO DISEASES ASSOCIATED WITH OCCUPATIONAL AND RECREATIONAL CONTACT WITH WATER AND WITH ANIMATE VECTORS OF DISEASE WHICH LIVE OR BREED IN WATER HABITATS. EMPHASIS THROUGHOUT IS ON MICROBIOLOGICAL AGENTS OF DISEASE.

AVAILABILITY: NATIONAL DEMONSTRATION WATER PROJECT, 1725 DESALES STREET, N.W., SUITE 402, WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW010192

PUBLICATION DATE: JUL 82

TITLE: EXECUTIVE SUMMARY SAFE WATER AND WASTE DISPOSAL FOR RURAL HEALTH: A PROGRAM GUIDE.

DESCRIPTOR: COMMUNITY PARTICIPATION; DISEASES; DEVELOPING COUNTRIES; DRINKING WATER; ECONOMICS; HUMAN RESOURCES; PLANNING; PUBLIC HEALTH; SANITATION; WASTE DISPOSAL; WATER QUALITY; WATER SUPPLY; WORLD PROBLEMS

DESCRIPTIVE NOTE: 13P.

ABSTRACT: THIS IS THE EXECUTIVE SUMMARY FOR SAFE WATER AND WASTE DISPOSAL FOR RURAL HEALTH: A PROGRAM GUIDE (EW 10193). A BRIEF STATEMENT REGARDING WATER-RELATED DISEASES, WATER QUALITY STANDARDS, WATER SYSTEM DEVELOPMENT, WASTE DISPOSAL SYSTEMS, PLANNING, COMMUNITY PARTICIPATION, HUMAN RESOURCE DEVELOPMENT, AND ECONOMIC CONSIDERATIONS IS PRESENTED.

AVAILABILITY: NATIONAL DEMONSTRATION WATER PROJECT, 1725 DESALES STREET, N.W., SUITE 402, WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW010193

PUBLICATION DATE: 82

TITLE: SAFE WATER AND WASTE DISPOSAL FOR RURAL HEALTH: A PROGRAM GUIDE.

DESCRIPTOR: COMMUNITY PARTICIPATION; DISEASES; *DEVELOPING COUNTRIES; *DRINKING WATER; ECONOMICS; HUMAN RESOURCES; *PLANNING; *PUBLIC HEALTH; SANITATION; *WASTE DISPOSAL; *WATER QUALITY; *WATER SUPPLY; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 232P.

ABSTRACT: THIS PUBLICATION IS WRITTEN FOR PEOPLE IN THE DEVELOPING NATIONS WHO HAVE THE RESPONSIBILITY FOR DEVELOPING AND IMPLEMENTING WATER SUPPLY AND SANITATION PROGRAMS FOR RURAL AREAS. ITS PURPOSE IS TO PROVIDE THAT AUDIENCE WITH AN OVERVIEW OF THE INFORMATION IT WILL NEED TO PROMOTE, DESIGN, AND CARRY OUT SUCH A PROGRAM. THE BOOK IS ORGANIZED IN THREE PARTS: PART ONE: WATER SUPPLY AND WORLD HEALTH; PART TWO: WATER SUPPLY AND WASTE DISPOSAL SYSTEMS; AND PART THREE: EFFECTIVE WATER SUPPLY AND SANITATION PROGRAMS.

AVAILABILITY: NATIONAL DEMONSTRATION WATER PROJECT, 1725 DESALES STREET, N.W., SUITE 402, WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW010200

PUBLICATION DATE: JUN 83

TITLE: ANALYSIS OF CRITICAL WATER PROBLEMS IN THE NORTHEASTERN UNITED STATES TO DETERMINE ESSENTIAL RESEARCH REQUIREMENTS.

PERSONAL AUTHOR: URISH, DANIEL W.

DESCRIPTOR: *FLOOD DAMAGE; *NORTHEAST UNITED STATES; *MANAGEMENT; *MINE WATER; *ONSITE TREATMENT; *RECYCLING; *RESEARCH NEEDS; *RIVERS; *WASTEWATER TREATMENT; *WATER RESOURCES

DESCRIPTIVE NOTE: 100P. PRICE CODE: PC A05/MF A01. PB83-235267.

ABSTRACT: THIS PROJECT WAS A RESEARCH PLANNING ENDEAVOR AND WAS REGIONAL IN SCOPE INVOLVING 15 WATER RESOURCES CENTERS OR INSTITUTES. THE FOLLOWING OBJECTIVES WERE PURSUED: (1) TO DEVELOP AN EFFECTIVE PROCEDURE FOR IDENTIFYING RESEARCH NEEDS AS THEY RELATE TO CRITICAL WATER RESOURCE PROBLEMS IN THE NORTHEAST REGION. (2) TO SEEK PARTICIPATION BY A BROAD SPECTRUM OF INDIVIDUALS AND INSTITUTIONS IN THE NORTHEASTERN STATES CONFRONTED WITH WATER RESOURCE PROBLEMS IN ORDER TO ASSIGN PRIORITIES TO THESE PROBLEMS. (3) TO FACILITATE THE TRANSFER OF KNOWLEDGE BETWEEN THE UNIVERSITIES AND PUBLIC DECISION MAKERS ON THE BASIS OF COLLABORATION AND THUS TO LAY THE GROUNDWORK FOR EFFECTIVE TECHNOLOGY TRANSFER. (4) TO MAKE OPTIMUM USE OF AVAILABLE RESEARCH FUNDS THROUGH MULTIPLE UNIVERSITY RESEARCH COOPERATION. SIX WORKSHOP CONFERENCES WERE HELD: SPECIFIC AREAS COVERED IN WORKSHOPS WERE: RECYCLING URBAN WASTEWATER ON LAND, PROCEDURES FOR

WATER RESEARCH PROPOSAL REVIEW, RIVER MANAGEMENT NEEDS, NON-STRUCTURAL ALTERNATIVES IN FLOOD DAMAGE ABATEMENT, ACID MINE WATER, AND ON-SITE TREATMENT OF DOMESTIC WASTES. THE PUBLISHED PROCEEDINGS OF THESE WORKSHOPS IDENTIFY CRITICAL RESEARCH NEEDS AND PROVIDE GUIDANCE IN RESEARCH PROGRAM DEVELOPMENT FOR BOTH STATE AND REGIONAL INTERESTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010201

PUBLICATION DATE: JUL 83

TITLE: BIODEGRADATION OF TOXIC PULPING EFFLUENTS. 1972-JULY 1983 (CITATIONS FROM THE INSTITUTE OF PAPER CHEMISTRY DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIODEGRADATION; BIBLIOGRAPHIES; *EFFLUENTS; *INDUSTRIAL WASTES; *LABORATORY PROCEDURES; *PAPER PULP; *PULP INDUSTRY; *RESEARCH REPORTS; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 151P. PRICE CODE: PCN01/MF N01. PB83-867762.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING PROBLEMS, RESOLUTIONS, AND EVALUATIONS OF BIOTREATMENT OF BIODEGRADABLE TOXIC EFFLUENTS FROM PULP MILLS. MUTAGENIC CHARACTERISTICS OF WASTE FROM CHLORINATION OF MOST PULPS ARE DISCUSSED RELATIVE TO THE RISKS INVOLVED TO WATER PLANT AND ANIMAL LIFE. LABORATORY MEASUREMENTS DETERMINING TOXICITY OF EFFLUENTS AND VARIOUS INDUSTRIAL BIODEGRADATION PROCESSES ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 104 CITATIONS, 18 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010202

PUBLICATION DATE: MAR 83

TITLE: DEVELOPMENT DOCUMENT FOR EFFLUENT LIMITATIONS GUIDELINES AND STANDARDS FOR THE NONFERROUS METALS POINT SOURCE CATEGORY. VOLUME 1.

DESCRIPTOR: *EFFLUENTS; *EFFLUENT LIMITATIONS; *GUIDELINES; *METALS; *NONFERROUS METALS; *POINT SOURCE POLLUTION; *REGULATIONS; *STANDARDS; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 493P. PRICE CODE: PC A21/MF A01. PB83-228296.

ABSTRACT: VOLUME 1, THE GENERAL DEVELOPMENT DOCUMENT PRESENTS DATA RATIONALE AND TECHNICAL ASPECTS OF THE PROPOSED EFFLUENT LIMITATIONS AND STANDARDS FOR THE NONFERROUS METALS POINT SOURCE CATEGORY PUBLISHED IN THE FEDERAL REGISTER ON FEBRUARY 11, 1983 FR 7032-34.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010203

PUBLICATION DATE: MAY 83

TITLE: DEVELOPMENT OF A CHEMICAL ANALYSIS FOR ULTRATRACE ARSENIC IN WATER.

PERSONAL AUTHOR: GOODE, SCOTT R.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ARSENIC; *LABORATORY PROCEDURES; *WATER; *WATER QUALITY

DESCRIPTIVE NOTE: 47P. PRICE CODE: PC A03/MF A01. PB83-227421.

ABSTRACT: ARSENIC IS ONE OF THE MOST TOXIC ELEMENTS KNOWN TO MAN. THE PRESENCE OF ARSENIC AT THE 0.01 G/ML LEVEL (0.01 PPM OR 10 PPB) IS CONSIDERED UNDESIRABLE FOR DRINKING WATER. THE WATER QUALITY LABORATORY, HOWEVER, IS INCAPABLE OF THE DETECTION OF ARSENIC AT THESE LEVELS. THUS ARSENIC IS SELDOM MONITORED AND RARELY PART OF A ROUTINE AND COMPREHENSIVE PROGRAM OF THE MEASUREMENT OF WATER QUALITY. A UNIQUE ENZYMATIC METHOD HAS BEEN DEVELOPED FOR THE DETERMINATION OF AS(V) IN NATURAL WATERS. THE METHOD USES ARSENIC TO CATALYZE A CHEMICAL REACTION WHICH PRODUCES A FLUORESCENT SPECIES. THE METHOD HAS A DETECTION LIMIT OF 8 MICROGRAMS/ML. A DETAILED STUDY OF THE MECHANISM AND MAGNITUDE OF INTERFERENCES HAS BEEN PERFORMED. THE RESULTS INDICATE THAT ONLY FE(+3) HAS THE CAPABILITY OF CAUSING ERRONEOUS RESULTS. THIS PROBLEM IS AVOIDED BY MASKING WITH CITRATE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010204

PUBLICATION DATE: MAY 83

TITLE: DOCUMENTATION FOR WATER QUALITY ANALYSIS SIMULATION PROGRAM (WASP) AND MODEL RERIFICATION PROGRAM (MVP).

PERSONAL AUTHOR: DITORO, DOMINIC M.; AND OTHERS

DESCRIPTOR: *COMPUTER APPLICATIONS; *COMPUTER PROGRAMS; *COMPUTER SOFTWARE; *MANUALS; *MANAGEMENT; *MODELS; *MVP; *SIMULATIONS; *WASP; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: 158P. PRICE CODE: PC A08/MF A01. PB83-225573.

ABSTRACT: A GENERALIZED WATER QUALITY MODELING PROGRAM AND A MODEL VERIFICATION ANALYSIS PROGRAM HAVE BEEN DEVELOPED THAT HAVE APPLICATION TO A WIDE VARIETY OF WATER RESOURCE MANAGEMENT PROBLEMS. THE WATER QUALITY ANALYSIS SIMULATION PROGRAM, WASP, MAY BE APPLIED TO ONE, TWO, AND THREE-DIMENSIONAL WATER BODIES, AND MODELS MAY BE STRUCTURED TO INCLUDE LINEAR AND NON-LINEAR KINETICS. DEPENDING UPON THE

MODELING FRAMEWORK THE USER FORMULATES, THE USER MAY CHOOSE, VIA INPUT OPTIONS, TO INPUT CONSTANT OR TIME-VARIABLE TRANSPORT AND KINETIC PROCESSES, AS WELL AS POINT AND NON-POINT WASTE DISCHARGES. THE MODEL VERIFICATION PROGRAM, MVP, MAY BE USED AS AN INDICATOR OF 'GOODNESS OF FIT' OR ADEQUACY OF THE MODEL AS A REPRESENTATION OF THE REAL WORLD. A USER'S MANUAL AND PROGRAM LISTINGS HAVE BEEN PREPARED. THE USER'S MANUAL WAS ORIENTED TOWARD THE SYSTEM ANALYST, WHOSE RESPONSIBILITY IT WOULD BE TO DESIGN, DEVELOP AND DEBUG NEW KINETIC MODELS FOR END USERS, AS WELL AS THE END USER WHO MUST PREPARE THE DATA INPUT TO THE PROGRAM.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010205

PUBLICATION DATE: JUL 83

TITLE: INTERNATIONAL AGREEMENTS ON WATER POLLUTION. 1970-JULY, 1983 (CITATIONS FROM POLLUTION ABSTRACTS).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *INTERNATIONAL AGREEMENTS; *POLLUTION; *REPORTS; *WASTE DISPOSAL; *WATER POLLUTION

DESCRIPTIVE NOTE: 86P. PRICE CODE: PC N01/MF N01. PB83-867960.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING INTERNATIONAL LAWS, AGREEMENTS, AND RELATIONS PERTAINING TO WATER POLLUTION STANDARDS, PREVENTION, AND CONTROL AND WATER QUALITY STANDARDS AND CONTROL. THE ROLES AND EFFECTS OF INTERNATIONAL LAWS, COOPERATION, AGENCIES, AND COMMISSIONS ARE CONSIDERED. DISCHARGES AND DISPOSAL OF POLLUTANTS AND WASTES OF VARIOUS TYPES FROM MANY SOURCES (INDUSTRIAL, MUNICIPAL, SHIPPING, ETC) ARE DISCUSSED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 101 CITATIONS, 12 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010206

PUBLICATION DATE: JUL 83

TITLE: INTERNATIONAL AGREEMENTS ON WATER POLLUTION. 1974-JULY, 1983 (CITATIONS FROM OCEANIC ABSTRACTS).

DESCRIPTOR: *AGREEMENTS; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *INTERNATIONAL AGREEMENTS; *LAWS; *POLLUTION; *STANDARDS; *WATER POLLUTION CONTROL; *WATER QUALITY

DESCRIPTIVE NOTE: 68P. PRICE CODE: PC N01/MF N01. PB83-867978.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING INTERNATIONAL LAWS, AGREEMENTS, AND RELATIONS PERTAINING TO WATER POLLUTION STANDARDS, PREVENTION, AND CONTROL AND WATER QUALITY STANDARDS AND CONTROL. THE ROLES AND EFFECTS OF INTERNATIONAL LAWS, COOPERATION, AGENCIES, AND COMMISSIONS ARE CONSIDERED. DISCHARGES AND DISPOSAL OF POLLUTANTS AND WASTES OF VARIOUS TYPES FROM MANY SOURCES (INDUSTRIAL, MUNICIPAL, SHIPPING, ETC) ARE DISCUSSED. (CONTAINS 78 CITATIONS FULLY INDEXED AND INCLUDING A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010207

PUBLICATION DATE: MAY 83

TITLE: METHODS FOR EVALUATING STREAM, RIPARIAN, AND BIOTIC CONDITIONS.

PERSONAL AUTHOR: PLATTS, WILLIAM S.; AND OTHERS

DESCRIPTOR: *BIOLOGY; *BIOTIC CONDITIONS; *ENVIRONMENT; *MEASUREMENT; *MONITORING; *REPORTS; *STREAMS; *WATER QUALITY

DESCRIPTIVE NOTE: 77P. PRICE CODE: PC A05/MF A01. PB83-225300.

ABSTRACT: THIS REPORT DEVELOPS A STANDARD WAY OF MEASURING STREAM, RIPARIAN, AND BIOTIC CONDITIONS AND EVALUATES THE VALIDITY OF THE MEASUREMENTS RECOMMENDED. ACCURACY AND PRECISION OF MOST MEASUREMENTS ARE DEFINED. THIS REPORT WILL BE OF VALUE TO THOSE PERSONS DOCUMENTING, MONITORING, OR PREDICTING STREAM CONDITIONS AND THEIR BIOTIC RESOURCES, ESPECIALLY THOSE RELATED TO IMPACTS FROM LAND USES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010208

PUBLICATION DATE: JUL 83

TITLE: OXYGEN SENSORS. 1970-JULY, 1983. (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *MEASUREMENT; *MONITORING; *OXYGEN; *OXYGEN SENSORS; *REPORTS; *TECHNOLOGY; *WATER QUALITY

DESCRIPTIVE NOTE: 161P. PRICE CODE: PC N01/MF N01. PB83-867648.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING TECHNOLOGY AND APPLICATIONS OF OXYGEN SENSORS. SENSOR DESIGN, FABRICATION, PERFORMANCE TESTS, AND DEVELOPMENT ARE DISCUSSED. APPLICATIONS IN BLOOD GAS ANALYSIS, LIFE SUPPORT SYSTEMS, WATER QUALITY MONITORING, SOLID STATE DEVICES, AND PERSONNEL HAZARD MONITORING ARE INCLUDED. TOPICS ALSO INCLUDE OXYGEN SENSING MATERIALS AND PORTABLE OXYGEN SENSORS. (CONTAINS 117 CITATIONS FULLY INDEXED AND INCLUDING

A TITLE LIST.)
AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010209

PUBLICATION DATE: MAR 83

TITLE: POTABLE WATER TREATMENT BY FOAM SEPARATION AND DISSOLVED AIR FLOTATION.

PERSONAL AUTHOR: KROFTA, MILOS; WANG, LAWRENCE K.

DESCRIPTOR: *AIR FLOTATION; *FOAM SEPARATION; *EQUIPMENT; *FACILITIES; *OPERATIONS (WATER); *PROCESS DESCRIPTIONS; *POTABLE WATER; *RESEARCH REPORTS; *TECHNOLOGY; *WATER TREATMENT

DESCRIPTIVE NOTE: 41P. PRICE CODE: PC A03/MF A01. PB83-232843.

ABSTRACT: THE NEWLY DEVELOPED WATER PURIFICATION SYSTEM USES A CATIONIC SURFACTANT AS DISINFECTION/COLLECTOR IN A FOAM SEPARATION CLARIFIER FOR TREATING 100% OF THE PLANT FLOW, AND USES A DISSOLVED AIR FLOTATION CLARIFIER AND A SAND FILTER FOR TREATMENT AND RECYCLING OF THE FOAM LIQUID AT 7% OF THE PLANT FLOW.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010210

PUBLICATION DATE: DEC 82

TITLE: QUANTITATION OF OIL SHALE WASTEWATER QUALITY. A MANUAL OF ANALYTICAL METHODS (LEAD ABSTRACT).

PERSONAL AUTHOR: DAUGHTON, C. G.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *LABORATORY PROCEDURES; *MANUALS; *OIL; *OIL SHALE; *PYROLYSIS; *WASTEWATER; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 151P. PRICE CODE: PC A08/MF A01.

ABSTRACT: THIS MANUAL IS A COMPENDIUM OF ANALYTICAL METHODS FOR THE QUANTITATION OF VARIOUS WATER QUALITY PARAMETERS. EACH METHOD IS SPECIFICALLY ADAPTED FOR APPLICATION TO THE HIGHLY COMPLEX SAMPLE MATRICES OF THE AQUEOUS WASTES THAT ARE GENERATED BY THE PYROLYTIC PRODUCTION OF SHALE OIL. THESE METHODS HAVE EVOLVED FROM SPECIFIC NEEDS OF THE LBL-SEEHRL OIL SHALE WASTE TREATMENT PROGRAM. (ERA CITATION 08:033175).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010211
PUBLICATION DATE: JUN 83

TITLE: REMOVAL OF METALS IN COMBINED TREATMENT SYSTEMS.

PERSONAL AUTHOR: PATTERSON, JAMES W.; AND OTHERS

DESCRIPTOR: *INDUSTRIAL WASTES; *METALS; *OPERATIONS (WASTEWATER); *PILOT STUDIES; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 274P. PRICE CODE: PC A12/MF A01. PB83-226076.

ABSTRACT: THIS PROJECT ASSESSED THE VARIABLES INFLUENCING THE REMOVAL OF EIGHT METALS THROUGH COMBINED INDUSTRIAL-MUNICIPAL TREATMENT PLANTS. THE EIGHT METALS INVESTIGATED WERE: ALUMINUM, CADMIUM, CHROMIUM, COPPER, IRON, LEAD, NICKEL, AND ZINC. THE METALS WERE STUDIED AT SUBTOXIC INFLUENT CONCENTRATIONS, AND THE INTERRELATIONSHIPS WHICH INFLUENCE METAL REMOVAL WERE ASSESSED. BATCH STUDIES ON RAW SEWAGE AND ACTIVATED SLUDGE IDENTIFIED AND DEFINED THE IMPACT OF INDIVIDUAL PARAMETERS OR CONCENTRATIONS AND OF COMBINATIONS OF PARAMETERS ON METALS REMOVAL. THE RESULTS OF THIS PROJECT INDICATE THAT THE REMOVAL OF METALS IN COMBINED INDUSTRIAL-MUNICIPAL TREATMENT SYSTEMS IS INFLUENCED BY A NUMBER OF WASTEWATER AND TREATMENT PLANT OPERATION CHARACTERISTICS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010212

PUBLICATION DATE: JUL 83

TITLE: SANITARY LANDFILLS. 1978-MAY 1983 (CITATIONS FROM THE ENGINEERING INDEX DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *ENERGY; *FUELS; *LAND USE; *LANDFILLS; *MONITORING; *SANITARY LANDFILLS; *WASTE DISPOSAL; *WATER POLLUTION

DESCRIPTIVE NOTE: 271P. PRICE CODE: PC N01/MF N01. PB83-807529.

ABSTRACT: CITATIONS OF WORLDWIDE REPORTS ON REFUSE DISPOSAL IN SANITARY LANDFILLS ARE PRESENTED. STUDIES COVERED ARE SITE SELECTION, REFUSE PROCESSING, EARTH MOVING EQUIPMENT, AND MONITORING. THE MAJORITY OF THESE ABSTRACTS CONCERN WATER POLLUTION AND GAS EVOLUTION AT DISPOSAL LOCATIONS. THE RECOVERY OF LANDFILL GAS FOR USE AS A FUEL IS DISCUSSED. LANDFILL DISPOSAL OF HAZARDOUS MATERIALS IS EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 229 CITATIONS, 51 AREWHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010213

PUBLICATION DATE: JUL 83

TITLE: ROADS AND RUNWAYS: SNOW REMOVAL AND DEICING TECHNIQUES. 1964-JUNE 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *DEICING; *RESEARCH REPORTS; *ROADS; *RUNWAYS; *SNOW; *SNOW REMOVAL

DESCRIPTIVE NOTE: 272P. PRICE CODE: PC N01/MF N01. PB83-807578.

ABSTRACT: THE BIBLIOGRAPHY COVERS RESEARCH REPORTS ON MATERIALS, MAINTENANCE, COSTS, CORROSION INHIBITION, POLLUTION, AND THE PLANNING APPLIED TO SNOW AND ICE REMOVAL. APPLICATIONS COVER BRIDGES AND RAILROADS AS WELL AS HIGHWAYS AND RUNWAYS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 263 CITATIONS, 19 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010214

PUBLICATION DATE: JUL 83

TITLE: STRIP MINING. 1930-JUNE 1983 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *ENVIRONMENTAL IMPACTS; *LAND RECLAMATION; *LAND USE; *MINING; *POLLUTION; *RESEARCH REPORTS; *REMOTE SENSING; *STRIP MINING

DESCRIPTIVE NOTE: 187P. PRICE CODE: PC N01/MF N01. PB83-807560.

ABSTRACT: ABSTRACTS PRIMARILY PERTAINING TO ENVIRONMENTAL IMPACTS, LAND RECLAMATION, AND SATELLITE REMOTE SENSING OF MINES ARE CITED FROM FEDERALLY-FUNDED RESEARCH. A FEW ABSTRACTS DEAL WITH MINING EQUIPMENT, LEGAL FACTORS, ECONOMICS, AND SAFETY ASPECTS OF STRIP MINING. (THIS UPDATED BIBLIOGRAPHY CONTAINS 179 CITATIONS, 28 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010215

PUBLICATION DATE: 82

TITLE: GUIDELINES FOR DRINKING WATER QUALITY VOLUME I - RECOMMENDATIONS.

DESCRIPTOR: CHEMICALS; *CONTAMINANTS; DISEASES; *DRINKING WATER; *GUIDELINES; *MICROBIOLOGY; MONITORING; *OPERATIONS (WATER); *PUBLIC HEALTH; RADIOACTIVITY; *RECOMMENDATIONS; *STANDARDS; *WATER QUALITY; *WATER SUPPLY; *WATER TREATMENT; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 140P.

ABSTRACT: THESE GUIDELINES ARE INTENDED FOR USE BY COUNTRIES AS A BASIS FOR THE DEVELOPMENT OF STANDARDS WHICH, IF PROPERLY IMPLEMENTED, WILL ASSURE THE SAFETY OF DRINKING-WATER SUPPLIES. THE LEVELS FOR WATER CONSTITUENTS AND CONTAMINANTS THAT ARE RECOMMENDED ARE NOT STANDARDS THEMSELVES. IN ORDER TO DEFINE STANDARDS, IT IS NECESSARY TO CONSIDER THESE RECOMMENDATIONS IN THE CONTEXT OF PREVAILING ENVIRONMENTAL, SOCIAL, ECONOMIC, AND CULTURAL CONDITIONS. THESE GUIDELINES ARE INTENDED TO SUPERSEDE BOTH THE EUROPEAN (1970) AND INTERNATIONAL (1971) STANDARDS FOR DRINKING WATER. INFORMATION IS INCLUDED ON MICROBIOLOGY, BIOLOGY, CHEMICAL AND PHYSICAL ASPECTS, AND RADIOACTIVE MATERIALS.

AVAILABILITY: WORLD HEALTH ORGANIZATION, 1211 GENEVA 27, SWITZERLAND

IRIS ACCESSION NUMBER: EW010217

PUBLICATION DATE: OCT 83

TITLE: ESTIMATION OF WATER DEMANDS USING DEFICIT ANALYSIS.

PERSONAL AUTHOR: CLARK, ROBERT M.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; *DEFICIT ANALYSIS; *MANAGEMENT; *RESERVOIRS; RESERVOIR CAPACTIY; *RIVERS; *WASHINGTON, D.C., *WATER DEMAND; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 271-286P.

ABSTRACT: THIS PAPER USES A TECHNIQUE, "DEFICIT ANALYSIS," THAT MATCHES AVAILABLE FLOW VERSUS ACTUAL AND/OR PROJECTED DEMANDS. THE TECHNIQUE IS APPLIED IN A CASE STUDY TO RESERVOIR SELECTION IN THE WASHINGTON, D.C. AREA.

AVAILABILITY: JOURNAL OF WATER RESOURCES PLANNING AND MANAGEMENT; V109 N4

IRIS ACCESSION NUMBER: EW010218

PUBLICATION DATE: OCT 83

TITLE: LAND APPLICATION OF WASTEWATER: WATER RIGHTS ISSUES.

PERSONAL AUTHOR: BELL, CRAIG; AND OTHERS

DESCRIPTOR: *EFFLUENTS; *LAND APPLICATION; *LEGAL PROBLEMS; *LEGISLATION; *WASTEWATER TREATMENT; *WATER RIGHTS; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 287-302P.

ABSTRACT: WHEN A WATER USER CHANGES PRACTICES THAT ALTER THE RETURN FLOW CHARACTERISTICS OF HIS ACTIVITIES, DOWNSTREAM USERS MAY HAVE A LEGAL ACTION IF THEIR RIGHTS ARE IMPAIRED. CONVERSION OF A CONVENTIONAL WASTEWATER TREATMENT OPERATION INVOLVING A SURFACE WATER DISCHARGE TO A LAND APPLICATION OPERATION CREATES THE POTENTIAL FOR WATER-RIGHTS CONFLICT.

AVAILABILITY: JOURNAL OF WATER RESOURCES PLANNING AND MANAGEMENT; V109 N4

IRIS ACCESSION NUMBER: EW010219

PUBLICATION DATE: OCT 83

TITLE: RESERVOIR OPERATION BY LINEAR AND DYNAMIC PROGRAMMING.

PERSONAL AUTHOR: MARINO, MIGUEL A.; MOHAMMADI, BEHZAD

DESCRIPTOR: *CALIFORNIA; *COMPUTER APPLICATIONS; *ENERGY; *MANAGEMENT; *MODELS; *RESERVOIRS; *WATER DEMAND; *WATER SUPPLY; *WATER RESOURCES; *WATER STORAGE

DESCRIPTIVE NOTE: 303-319P.

ABSTRACT: THIS PAPER PRESENTS AN EFFICIENT ALGORITHM FOR THE MONTHLY OPERATION OF A SYSTEM OF TWO PARALLEL MULTIPURPOSE RESERVOIRS THAT IS SOLVED WITH A MINICOMPUTER. THE MODEL IS APPLIED TO RESERVOIRS OF THE CALIFORNIA VALLEY PROJECT, AND THE RESULTS ARE REVIEWED.

AVAILABILITY: JOURNAL OF WATER RESOURCES PLANNING AND MANAGEMENT; V109 N4

IRIS ACCESSION NUMBER: EW010220

PUBLICATION DATE: OCT 83

TITLE: TECHNIQUE FOR CALIBRATING NETWORK MODELS.

PERSONAL AUTHOR: WALSKI, THOMAS M.

DESCRIPTOR: *CARRYING CAPACITY; *FLOW MEASUREMENT; *MODELS; *MODEL CALIBRATIONS; *PIPE ROUGHNESS; *WATER DISTRIBUTION; *WATER USE; *WATER SUPPLY; *WATER NETWORKS

DESCRIPTIVE NOTE: 360-372P.

ABSTRACT: THIS PAPER PRESENTS FORMULAS TO ASSIST THE USER IN DECIDING WHETHER TO ADJUST PIPE ROUGHNESS OR WATER USE AND BY HOW MUCH. A MODEL IS CONSIDERED CALIBRATED TO THE EXTENT THAT IT CAN PREDICT THE BEHAVIOR OF THE WATER DISTRIBUTION SYSTEM OVER A WIDE RANGE OF OPERATING CONDITIONS AND WATER USE.

AVAILABILITY: JOURNAL OF WATER RESOURCES PLANNING AND MANAGEMENT; V109 N4

IRIS ACCESSION NUMBER: EW010227

PUBLICATION DATE: OCT 83

TITLE: NEW USE OF INCINERATOR CUTS COST OF SLUDGE DRYING.

DESCRIPTOR: *COSTS; *ECONOMICS; *FACILITIES; *INCINERATORS; *OPERATIONS (WASTEWATER); *SLUDGE; *SLUDGE DRYING; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 52-54P.

ABSTRACT: A WASTE-TO-ENERGY INCINERATOR MAKES SLUDGE PELLETIZING PROCESSES MORE RELIABLE AND COST EFFECTIVE.

AVAILABILITY: PUBLIC WORKS; V114 N10

IRIS ACCESSION NUMBER: EW010228

PUBLICATION DATE: OCT 83

TITLE: SEWAGE SLUDGE DEWATERING.

PERSONAL AUTHOR: SPOHR, GUENTER W.

DESCRIPTOR: *COMPOSTING; *DEWATERING; *MARYLAND; *OPERATIONS (WASTEWATER); *SLUDGE; *SLUDGE DEWATERING; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 58-59P.

ABSTRACT: DESCRIBED IS A "COMPOST WALL" WHICH OFFERS A NON-MECHANICAL FILTERING METHOD TO INCREASE SLUDGE DENSITY. THE SYSTEM IS USED IN CAMBRIDGE, MARYLAND FOR SLUDGE DEWATERING.

AVAILABILITY: PUBLIC WORKS; V114 N10

IRIS ACCESSION NUMBER: EW010229

PUBLICATION DATE: OCT 83

TITLE: INSECTS ASSOCIATED WITH WASTEWATER TREATMENT: THEIR ROLE AND CONTROL.

PERSONAL AUTHOR: GERARDI, MICHAEL H.; GRIMM, JAMES K.

DESCRIPTOR: *BIOLOGY; *INSECTS; *INSECT CONTROL; *LAGOONS; *OPERATIONS (WASTEWATER); *STABILIZATION PONDS; *TRICKLING FILTERS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 60-63P.

ABSTRACT: DISCUSSED ARE INSECTS THAT INHABIT TRICKLING FILTERS AND STABILIZATION PONDS OR LAGOONS, THEIR LIFE CYCLES, AND METHODS OF CONTROL.

AVAILABILITY: PUBLIC WORKS; V114 N10

IRIS ACCESSION NUMBER: EW010230
PUBLICATION DATE: OCT 83

TITLE: IS YOUR COMMUNITY'S GROUNDWATER SAFE TO DRINK?

PERSONAL AUTHOR: HESS, ALAN F.; AND OTHERS

DESCRIPTOR: *CONTAMINANTS; *DRINKING WATER; *GROUNDWATER; *INORGANIC CONTAMINANTS; *OPERATIONS (WATER); *ORGANIC CONTAMINANTS; *REGULATIONS; *WATER TREATMENT

DESCRIPTIVE NOTE: 72-76P.

ABSTRACT: A MAJOR CHALLENGE OF THE 1980S IS FINDING COST-EFFECTIVE MEANS FOR CONTROLLING GROUNDWATER CONTAMINATION. REGULATIONS, POTENTIAL SOURCES OF GROUNDWATER CONTAMINATION, AND TREATMENT METHODS AND TECHNOLOGY ARE CONSIDERED.

AVAILABILITY: PUBLIC WORKS; V114 N10

IRIS ACCESSION NUMBER: EW010231

PUBLICATION DATE: OCT 83

TITLE: COST-EFFECTIVE REHABILITATION OF A WASTEWATER RECLAMATION PLANT.

PERSONAL AUTHOR: HARRIS, PHILLIP G.; STEELE, MYRON E.

DESCRIPTOR: *CALIFORNIA; *COSTS; *COST EFFECTIVENESS; *FACILITIES; *REHABILITATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 78-79P.

ABSTRACT: DISCUSSED IS A PLAN TO REHABILITATE A WASTEWATER RECLAMATION PLANT. THE DECISION TO REHABILITATE THE PLANT, RATHER THAN REPLACING IT WILL PRODUCE CONSIDERABLE SAVINGS.

AVAILABILITY: PUBLIC WORKS; V114 N10

IRIS ACCESSION NUMBER: EW010232

PUBLICATION DATE: OCT 83

TITLE: EFFLUENT IRRIGATION ELIMINATES SURFACE DISCHARGE.

DESCRIPTOR: *EFFLUENTS; *FACILITIES; *FLORIDA; *HOLDING PONDS; *IRRIGATION; *OPERATIONS (WASTEWATER); *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 104P.

ABSTRACT: DESCRIBED IS A SUCCESSFUL IRRIGATION PROGRAM TO ELIMINATE SURFACE WATER DISCHARGE OF EFFLUENTS BY RE-USING WASTE IN IRRIGATION. THE PLANT IN TALLAHASSEE, FLORIDA USES SOIL WHICH IS VERY SANDY IN THE IRRIGATION AREA.

AVAILABILITY: PUBLIC WORKS; V114 N10

IRIS ACCESSION NUMBER: EW010233
PUBLICATION DATE: OCT 83

TITLE: SEWER DRAGONS' FIERY BREATH DOUSED WITH PREVENTION.

PERSONAL AUTHOR: BUTT, JAMES D.

DESCRIPTOR: *ACCIDENT PREVENTION; *MONITORING; *SAFETY; *SEWERS; *TRAINING; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 34-35,38,40P.

ABSTRACT: THROUGH PROPER TRAINING AND SAFETY METHODS, SEWER RELATED WORK ACCIDENTS CAN BE AVOIDED. EXPLOSIVE GASES, TOXIC GASES, AND LACK OF OXYGEN PRESENT POTENTIAL PROBLEMS FOR WORKERS.

AVAILABILITY: AMERICAN CITY & COUNTY; V98 N10

IRIS ACCESSION NUMBER: EW010234

PUBLICATION DATE: OCT 83

TITLE: MAINTENANCE WILL CONTROL INFILTRATION/INFLOW WOES.

PERSONAL AUTHOR: STEKETEE, C. H.

DESCRIPTOR: *COSTS; *INFILTRATION; *INFLOW; *MAINTENANCE; *PREVENTIVE MAINTENANCE; *PROBLEMS; *SEWERS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 34,36,38P.

ABSTRACT: PROBLEMS OF SEWER INFILTRATION/INFLOW (I/I) AND SOME SOLUTIONS TO REDUCE I/I ARE DISCUSSED.

AVAILABILITY: AMERICAN CITY & COUNTY; V98 N10

IRIS ACCESSION NUMBER: EW010244

PUBLICATION DATE: 83

TITLE: WATER SUPPLY SYSTEM OPERATION - A FIELD STUDY TRAINING PROGRAM.

PERSONAL AUTHOR: KERRI, KENNETH D.

DESCRIPTOR: *CORRESPONDENCE COURSES; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WATER); *OPERATOR TRAINING; *POSTSECONDARY EDUCATION; *TRAINING; *WATER DISTRIBUTION; *WATER TREATMENT

DESCRIPTIVE NOTE: 800P.

ABSTRACT: THIS TRAINING MANUAL IS ONE VOLUME OF A SEVEN VOLUME SERIES. THIS MANUAL IS FOR OPERATORS WITH RESPONSIBILITY FOR WELLS, PUMPS, SMALL WATER TREATMENT PLANTS, AND DISINFECTION AND DISTRIBUTION SYSTEMS. SECTIONS ARE INCLUDED ON (1) THE WATER SUPPLY SYSTEM OPERATOR, (2) WATER SOURCES AND TREATMENT, (3) WELLS, (4) SMALL WATER TREATMENT PLANTS, (5) STORAGE FACILITIES, (6) DISTRIBUTION SYSTEM FACILITIES, (7) WATER QUALITY CONSIDERATIONS IN DISTRIBUTION SYSTEMS, (8) DISTRIBUTION SYSTEMS OPERATION AND MAINTENANCE, (9) DISINFECTION, (10) SAFETY, AND (11) LABORATORY PROCEDURES. APPENDICES INCLUDING A FINAL EXAMINATION ARE INCLUDED. THE MATERIALS ARE DESIGNED TO BE USED IN A CLASS SITUATION OR FOR HOME STUDY BY CORRESPONDENCE.

AVAILABILITY: KENNETH KERRI, DEPARTMENT OF CIVIL ENGINEERING, CALIFORNIA STATE UNIVERSITY, SACRAMENTO, 6000 "J" STREET, SACRAMENTO, CA 95819

IRIS ACCESSION NUMBER: EW010245

PUBLICATION DATE: 83

TITLE: ABSTRACTS OF TECHNICAL PAPERS.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *ABSTRACTS; *CONFERENCE PROCEEDINGS; EQUIPMENT; FACILITIES; LABORATORY PROCEDURES; *OPERATIONS (WASTEWATER); RESEARCH; SAFETY; TRAINING; *WASTEWATER TREATMENT; *WPCF

ABSTRACT: THIS PUBLICATION CONTAINS ABSTRACTS OF TECHNICAL PAPERS PRESENTED AT THE 56TH ANNUAL CONFERENCE OF THE WATER POLLUTION CONTROL FEDERATION. PAPERS ARE INCLUDED ON ALL ASPECTS OF WASTEWATER TREATMENT AND WASTEWATER TREATMENT OPERATIONS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVENUE, N.W., WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW010247

PUBLICATION DATE: 83

TITLE: WATERWORKS: AN OWNER-BUILDER GUIDE TO RURAL WATER SYSTEMS.

PERSONAL AUTHOR: HACKLEMAN, MICHAEL

DESCRIPTOR: *CONSTRUCTION; *DESIGN; *EQUIPMENT; *ONSITE WATER TREATMENT; *RURAL AREAS; *WATER SUPPLY; *WATER TREATMENT; *WATER RESOURCES

DESCRIPTIVE NOTE: 172P. PRICE: $14.95.

ABSTRACT: IN MANY PARTS OF THE WORLD, EVEN IN THE U.S., CITY WATER SYSTEMS DO NOT EXIST. THE AUTHOR DISCUSSES WATER SOURCES AND THEIR EVALUATION, SOURCES OF ENERGY FOR OBTAINING IT, HARDWARE, SITING, REUSE IF NECESSARY, CAPACITY, AND MANY OTHER ASPECTS OF THE "DO-IT-YOURSELF" WATER SUPPLY.

AVAILABILITY: DOUBLEDAY 8 CO., INC., 245 PARK AVENUE, NEW YORK, NY 10167

IRIS ACCESSION NUMBER: EW010248

PUBLICATION DATE: JUL 83

TITLE: GROUND WATER POLLUTION. 1964-MARCH, 1983 (CITATIONS FROM THE AMERICAN PETROLEUM INSTITUTE DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *GROUNDWATER; *OIL; *PETROLEUM; *POLLUTION; *RESEARCH; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 217P. PRICE CODE: PC N01/MF N01. PB83-807693.

ABSTRACT: THE BIBLIOGRAPHY CONTAINS ABSTRACTS OF WORLDWIDE RESEARCH ON THE CONTAMINATION OF GROUND WATER, ESPECIALLY FROM PETROLEUM AND PETROCHEMICAL SOURCES. CAUSES, PHENOMENA, PREVENTION, CONTROL, AND ANALYSIS ARE AMONG THE SUBJECTS COVERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 210 CITATIONS, 12 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010249

PUBLICATION DATE: JUL 83

TITLE: PULPING WASTEWATER TREATMENT: AERATION PROCESSES AND EQUIPMENT. 1976-JULY, 1983 (CITATIONS FROM THE PAPER AND BOARD, PRINTING, AN

DESCRIPTOR: *AERATION; *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *INDUSTRIES; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); *PULP INDUSTRY; *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 159P. PRICE CODE: PC N01/MF N01. PB83-869156.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING PLANT OPERATIONS AND METHODS, AND PILOT PLANT AND LABORATORY TESTS AND RESULTS OF PULPING MILL WASTEWATER TREATMENT BY AERATION. COMPOSITION OF EFFLUENT COMPONENTS INCLUDING CONDENSATES, BLEACHING EFFLUENTS, AND SPENT LIQUOR ARE DISCUSSED. FOREIGN AND DOMESTIC PLANT EFFICIENCY, PERFORMANCE REPORTS, AND COST DATA ARE CONSIDERED. AERATOR DESIGN, LAGOON TREATMENT SYSTEM UPGRADING CONSIDERATIONS, AND ENVIRONMENTAL ASPECTS ARE INCLUDED. (CONTAINS 98 CITATIONS FULLY INDEXED AND INCLUDING A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010250

PUBLICATION DATE: JUL 83

TITLE: PULP MILL EFFLUENTS: ACTIVATED SLUDGE TREATMENT PROCESS. 1976-JULY, 1983 (CITATIONS FROM THE PAPER AND

BOARD, PRINTING, AND PACKA
DESCRIPTOR: *ACTIVATED SLUDGE; *ANNOTATED BIBLIOGRAPHIES; *EFFLUENTS; BIBLIOGRAPHIES; *COSTS; *FACILITIES; *MONITORING; *OPERATIONS (WASTEWATER); *PULP MILLS; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 182P. PRICE CODE: PC N01/MF N01. PB83-869248.

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING PLANT HISTORIES, LABORATORY ANALYSES, FIELD APPLICATIONS, PERFORMANCE EVALUATIONS, AND COST FACTORS OF PULPING MILL ACTIVATED SLUDGE TREATMENT FACILITIES. MONITORING TECHNIQUES OF THE ACTIVATED SLUDGE EFFLUENT TREATMENT PROCESS, AND OPERATING PROBLEMS AND SOLUTIONS ARE DISCUSSED. COMPUTERIZED SIMULATION OF ACTIVATED SLUDGE PLANTS ARE INCLUDED. (CONTAINS 118 CITATIONS FULLY INDEXED AND INCLUDING A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010251

PUBLICATION DATE: MAY 83

TITLE: TREATMENT OF VOLATILE ORGANIC COMPOUNDS IN DRINKING WATER.

PERSONAL AUTHOR: LOVE, O. T.; AND OTHERS
DESCRIPTOR: *DRINKING WATER; GROUNDWATER; *OPERATIONS (WATER); *ORGANIC COMPOUNDS; SURFACE WATER; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 118P. PRICE CODE: PC A06/MF A01. PB83-239434.

ABSTRACT: VOLATILE CHLORINATED AND NON-CHLORINATED COMPOUNDS OCCUR IN BOTH UNTREATED AND TREATED DRINKING WATER. BECAUSE VOLATILIZATION IS RESTRICTED, GROUND WATERS RATHER THAN SURFACE WATERS ARE MORE LIKELY TO HAVE HIGH CONCENTRATIONS OF THESE COMPOUNDS. THIS DOCUMENT REVIEWS PROPERTIES, OCCURRENCE, AND EXPERIENCE, PARTICULARLY LABORATORY AND PILOT SCALE, WITH THE CONTROL OF THE FOLLOWING COMPOUNDS: TRI- AND TETRACHLOROETHYLENE; CIS- AND TRANS-1,2-DICHLOROETHYLENE; 1,1-DICHLOROETHYLENE; VINYL AND METHYLENE CHLORIDE; 1,1,1-TRI-CHLOROETHANE; 1,2-DICHLOROETHANE; CARBON TETRACHLORIDE; BENZENE; CHLOROBENZENE; 1,2-, 1,3-, AND 1,4-DICHLOROBENZENE; AND 1,2,4-TRICHLOROBENZENE. CONVENTIONAL WATER TREATMENT WILL NOT GENERALLY REDUCE THE CONCENTRATIONS OF THESE COMPOUNDS, BUT THEY CAN BE REDUCED BY AERATION, ADSORPTION ON GRANULAR ACTIVATED CARBON OR SYNTHETIC RESINS, OR COMBINATIONS OF THESE PROCESSES. BOILING CAN ALSO BE EFFECTIVE FOR HOME TREATMENT OF THESE CONTAMINANTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW010254
PUBLICATION DATE: FAL 83

TITLE: ORGANIC COMPOUNDS AND GROUND-WATER POLLUTION.

PERSONAL AUTHOR: PETTYJOHN, WAYNE A.; HOUNSLOW, ARTHUR W.

DESCRIPTOR: *CONTAMINATION; *CRITERIA; *GROUNDWATER; *ORGANIC COMPOUNDS; *POLLUTANTS; *STANDARDS; *TOXICITY; *WATER QUALITY

DESCRIPTIVE NOTE: 41-47P.

ABSTRACT: DESCRIBED ARE MANY ORGANIC COMPOUNDS FOUND IN GROUNDWATER. INCLUDED IN THE DISCUSSION IS THEIR ORIGIN AND SIGNIFICANCE.

AVAILABILITY: GROUND WATER MONITORING REVIEW; V3 N4

IRIS ACCESSION NUMBER: EW010255

PUBLICATION DATE: 38

TITLE: OHIO RIVER POLLUTION.

PERSONAL AUTHOR: U.S. PUBLIC HEALTH SERVICE

DESCRIPTOR: *AUDIOVISUAL AIDS; *HISTORY; *OHIO RIVER; *POLLUTION; *RIVERS; *VIDEOCASSETTES; *WATER POLLUTION CONTROL; *WATER RESOURCES
DESCRIPTIVE NOTE: RENTAL PRICE: $15.00. 30 MINUTE SILENT BLACK & WHITE 3/4" U-MATIC VIDEOCASSETTE. SOME GRAPHICS ARE DIFFICULT TO READ.

ABSTRACT: DOCUMENTS THE DEVELOPMENT OF CONCERNS ABOUT WATER POLLUTION DURING THE 1930S. THE HISTORICAL FOOTAGE INCLUDES THE 1937 FLOOD ALONG THE OHIO RIVER, INDUSTRIAL WASTES DUMPED INTO MILL CREEK, ACID MINE DRAINAGE, AN ACTIVATED SLUDGE PLANT, AND "KISKI," A FLOATING WATER ANALYSIS LABORATORY.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW010256

PUBLICATION DATE: 73

TITLE: THE GIFTS.

PERSONAL AUTHOR: U.S. DEPARTMENT OF THE INTERIOR, FEDERAL WATER.

DESCRIPTOR: *AIR; *AUDIOVISUAL AIDS; *CONSERVATION; *LAND USE; *HUMAN ACTIVITY; *NATURAL RESOURCES; *VIDEOCASSETTES; *WATER RESOURCES

DESCRIPTIVE NOTE: RENTAL PRICE: $15.00. FILM IS NOT AVAILABLE TO PURCHASE. 29 MINUTE COLOR 3/4" U-MATIC VIDEOCASSETTE OR COLOR 16 MM FILM.

ABSTRACT: REPORTS ON THE DEGRADATION OF AMERICA'S "GIFTS" OF AIR, WATER, AND LAND CAUSED BY HUMAN ACTIVITY.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW010257

TITLE: THE CLEANER THE WATER: APPROACHES TO SLUDGE MANAGEMENT.

PERSONAL AUTHOR: BLACKSIDE FILMS FOR U.S. EPA.

DESCRIPTOR: *AUDIOVISUAL AIDS; *LANDFILLS; *MANAGEMENT; *LAND APPLICATION; *INCINERATION; *VIDEOCASSETTES; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: RENTAL PRICE: $15.00. 25 MINUTE COLOR 3/4" U-MATIC VIDEOCASSETTE.

ABSTRACT: PRESENTS ALTERNATIVE METHODS OF MANAGING MUNICIPAL SLUDGE, INCLUDING LANDFILL, LAND APPLICATION, COMPOSTING, AND INCINERATION. FACILITY VISITS ARE EXPLAINED BY ONSITE PERSONNEL.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW010258

PUBLICATION DATE: 83

TITLE: COMPILATION OF WATER RESOURCES COMPUTER PROGRAM ABSTRACTS.

PERSONAL AUTHOR: KOHLHAAS, CHARLES A., ED.

DESCRIPTOR: *ABSTRACTS; *COMPUTER SOFTWARE; *COMPUTER PROGRAMS; *INFORMATION SOURCES; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: 188P. PRICE: $50.00.

ABSTRACT: THIS COMPILATION CONTAINS ABSTRACTS THAT DOCUMENT NONPROPRIETARY COMPUTER PROGRAMS IN THE WATER RESOURCES AND WATER QUALITY FIELDS.

AVAILABILITY: ABSTRACTS, 50 BROAD STREET, 19TH FLOOR, NEW YORK, NY 10004

IRIS ACCESSION NUMBER: EW010259

PUBLICATION DATE: 83

TITLE: GROUNDWATER MONITORNG TECHNOLOGY.

PERSONAL AUTHOR: MORRISON, ROBERT D.

DESCRIPTOR: *EQUIPMENT; *GROUNDWATER; *MONITORING; *SAMPLING; *SITE PREPARATION; *TECHNOLOGY

DESCRIPTIVE NOTE: 132P. PRICE: $31.00 (PLUS $2.00 FOR SHIPPING; OUTSIDE U.S., ADD $12.00).

ABSTRACT: THIS BOOK COVERS THREE MAJOR TOPICS: MONITORING IN THE VADOSE (UNSATURATED) ZONE; MONITORING IN THE SATURATED ZONE; AND SAMPLING EQUIPMENT. SAMPLING SITE SELECTION AND SITE PREPARATION. EQUIPMENT CALIBRATION, SAMPLE AND SITE CONTAMINATION, COLLECTION METHODS, AND MANY OTHER PERTINENT SUBJECTS ARE DISCUSSED.

AVAILABILITY: TIMCO MFG., INC., 851 - 15TH STREET, PRAIRIE DU SAC, WI 53578

IRIS ACCESSION NUMBER: EW010261

PUBLICATION DATE: 83

TITLE: SEASONAL VARIATIONS IN THE NATURE AND REMOVABILITY OF RESERVOIR THM PRECURSORS.

PERSONAL AUTHOR: HOEHN, ROBERT C.; AND OTHERS

DESCRIPTOR: *DRINKING WATER; *ORGANIC COMPOUNDS; *RESERVOIRS; *RESEARCH REPORTS; *THM; *TRIHALOMETHANES; *WATER SUPPLY; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 128P. $6.00.

ABSTRACT: THIS STUDY EMPHASIZES THE IMPORTANCE OF BIOLOGICAL ACTIVITY IN ALTERING THE NATURE OF DISSOLVED ORGANIC CARBON (DOC) IN A RESERVOIR, ESPECIALLY THAT PORTION THAT CAN BECOME TRIHALOMETHANES (THMS). STUDIES AND THEIR RESULTS ARE PRESENTED.

AVAILABILITY: VIRGINIA WATER RESOURCES RESEARCH CENTER, 617 N. MAIN STREET., BLACKSBURG, VA 24060-3397

IRIS ACCESSION NUMBER: EW010262

PUBLICATION DATE: 83

TITLE: ENGINEERING-IN-TRAINING REVIEW MANUAL.

PERSONAL AUTHOR: LINDEBURG, MICHAEL R.

DESCRIPTOR: *CONTINUING EDUCATION; *ENGINEERING; *INSTRUCTIONAL MATERIALS; *POSTSECONDARY EDUCATION

DESCRIPTIVE NOTE: 672P. PRICE: $32.00.

ABSTRACT: THE SIXTH EDITION OF THIS MANUAL IS A COMPLETE COURSE IN ITSELF. STARTING WITH A 20 PAGE DISCOURSE ON THE E-I-T EXAM THE VOLUME COVERS 19 DIFFERENT SUBJECTS BEFORE CONCLUDING WITH MISCELLANEOUS INFORMATION, PROBLEM SOLUTIONS, A SAMPLE EXAMINATION, AND A SUBJECT INDEX. CONSULTING FIRMS AND MUNICIPALITIES WISHING TO UPGRADE THE PROFESSIONAL LEVEL OF THEIR STAFF WILL FIND THIS A USEFUL TEXT. THE MORE "EXPERIENCED" ENGINEER MAY ALSO FIND THIS A USEFUL REFERENCE WHEN HE OR SHE NEEDS TO REFER TO SOME "LONG-FORGOTTEN" BASICS. EACH CHAPTER BEGINS WITH THE BASIC, THEORETICAL BACKGROUND DATA BEFORE LEADING INTO SAMPLE PROBLEMS. NOMENCLATURE, DRAWINGS, AND DIAGRAMS ARE INCLUDED AS NECESSARY.

AVAILABILITY: PROFESSIONAL PUBLICATIONS, INC., P. O. BOX 199, SAN CARLOS, CA 04070

IRIS ACCESSION NUMBER: EW010263

PUBLICATION DATE: 83

TITLE: TUNNEL ENGINEERING HANDBOOK.

PERSONAL AUTHOR: BICKEL, JOHN O.; KUESEL, T. R.

DESCRIPTOR: *DESIGN; *CONSTRUCTION; *ENGINEERING; *HANDBOOKS; *MAINTENANCE; *POSTSECONDARY EDUCATION; *REHABILITATION; *TUNNELS

DESCRIPTIVE NOTE: 670P. PRICE: $52.50.

ABSTRACT: THIS HANDBOOK PROVIDES A REFERENCE GUIDE TO THE EXPERIENCED ENGINEER AND TO THOSE WHO MAY BE BRANCHING OUT INTO AREAS NOT WHOLLY COVERED BY THEIR EXPERTISE. THE YOUNGER ENGINEER WILL FIND THIS VOLUME A USEFUL GUIDE TO THE STATE-OF-THE-ART OF TUNNEL ENGINEERING AND MAINTENANCE/REHABILITATION PERSONNEL WILL ALSO FIND IMPORTANT INFORMATION. THE NUMEROUS REFERENCES CITED AID THE READER IN SECURING ADDITIONAL INFORMATION ON A PARTICULAR ASPECT, DETAIL, OR CASE STUDY. A GLOSSARY AND NUMEROUS ILLUSTRATIONS SUPPLEMENT THE TEXT.

AVAILABILITY: VAN NOSTRAND REINHOLD, 135 WEST 50TH STREET, NEW YORK, NY 10020.

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                                       EW009964   EW009973  EW009976  EW009984  EW009993  EW009994  EW009997  EW010018
                                       EW010019   EW010020  EW010023  EW010025  EW010026  EW010028  EW010029  EW010035
                                       EW010037   EW010040  EW010046  EW010051  EW010052  EW010053  EW010078  EW010113
                                       EW010146   EW010149  EW010159  EW010160  EW010162  EW010164  EW010178  EW010180
                                       EW010183   EW010186  EW010187  EW010188  EW010209  EW010227  EW010231  EW010232
                                       EW010250

 FACILITIES                            (2)        EW010158  EW010245


*FARMS                                 (1)        EW010102

*FEDERAL POLICIES                      (1)        EW009523

*FEDERAL ROLE                          (2)        EW009984  EW010133

 FEDERAL ROLE                          (1)        EW009560

*FERROUS IRON                          (1)        EW008643

*FERTILIZER                            (1)        EW010093

*FERTILIZERS                           (2)        EW010067  EW010094

*FILMS                                 (1)        EW009251

*FILTERS                               (2)        EW009258  EW010059

*FILTRATION                            (2)        EW009996  EW010066

 FILTRATION                            (1)        EW009545

*FINANCES                              (2)        EW010137  EW010138

*FINANCING                             (4)        EW009316  EW009983  EW010141  EW010188

*FINANCING STRATEGIES                  (1)        EW010189

*FIRE                                  (1)        EW009421

*FISH                                  (1)        EW009989

*FIXED FILM BIOLOGICAL PROCESSES       (1)        EW010019

*FIXED FILM CONTACTORS                 (1)        EW010052

*FIXED FILM PROCESSES                  (1)        EW010031

*FIXED FILM REACTORS                   (3)        EW010025  EW010051  EW010055


*FLANDERS INTERACTION ANALYSIS SYSTEM  (1)        EW010127

*FLOCCULATION                          (2)        EW009532  EW010009
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*FLOOD CONTROL	(1)	EW009295
FLOOD CONTROL	(1)	EW009523
*FLOOD DAMAGE	(1)	EW010200
*FLORIDA	(1)	EW010232
*FLOW MEASUREMENT	(1)	EW010220
*FLUID FLOW	(2)	EW009434 EW010008
*FLUID MECHANICS	(1)	EW009434
*FLUID POWER SYSTEMS	(1)	EW009261
*FLUMES	(1)	EW010008
*FLUORIDE	(1)	EW009144
*FOAM SEPARATION	(1)	EW010209
*FOOD	(1)	EW009299
*FRESH WATER	(2)	EW010130 EW010131
*FRICTION	(1)	EW010008
*FUELS	(1)	EW010212
*FUNDING	(2)	EW009541 EW009997
*GAS ENGINES	(1)	EW010111
*GASES	(1)	EW009434
*GAS FEEDERS	(1)	EW010009
*GAS PRODUCTION	(1)	EW010181
*GEMS/WATER	(1)	EW009302
*GEOPHYSICAL METHODS	(1)	EW009980
*GEORGIA	(1)	EW010180
*GEOTHERMAL WASTES	(1)	EW009547
*GERMANY	(1)	EW009983
*GRANUALR ACTIVATED CARBON	(1)	EW009973
*GRAPHIC SYMBOLS	(1)	EW009261
*GRASSLANDS	(1)	EW009525
*GRAVITY PLATE SETTLERS	(1)	EW010021
*GREASE	(1)	EW009147
*GROUNDWATER	(17)	EW009144 EW009298 EW009467 EW009972 EW009978 EW009979 EW009980 EW009981 EW009982 EW010032 EW010043 EW010135 EW010190 EW010230 EW010248 EW010254 EW010259

GROUNDWATER	(4)	EW009523	EW009538	EW010166	EW010251
*GUIDELINES	(4)	EW010033	EW010077	EW010202	EW010215
*GUIDES	(4)	EW010007	EW010027	EW010117	EW010187
*HALIDES	(1)	EW009974			
*HALOMETHANES	(1)	EW009558			
*HANDBOOKS	(2)	EW009434	EW010263		
*HARBORS	(1)	EW010053			
*HARDNESS	(2)	EW008640	EW010190		
*HAZARDOUS MATERIALS	(2)	EW009547	EW010116		
*HAZARDOUS SUBSTANCES	(1)	EW009971			
*HAZARDOUS WASTES	(3)	EW009466	EW010166	EW010176	
*HAZARDOUS WASTE SITES	(2)	EW009466	EW010176		
*HEADWORKS	(1)	EW010184			
*HEALTH	(1)	EW010191			
HEALTH	(1)	EW010082			
HEALTH EDUCATION	(1)	EW010120			
*HEAT	(1)	EW010109			
*HEAT RECOVERY	(1)	EW010111			
*HEAVY METALS	(2)	EW010062	EW010147		
*HISTORY	(3)	EW009295	EW009523	EW010255	
*HOLDING PONDS	(1)	EW010232			
*HOMES	(1)	EW010102			
*HOT WATER	(1)	EW010109			
*HOT WATER HEATERS	(1)	EW010117			
*HUMAN ACTIVITY	(1)	EW010256			
HUMAN RESOURCES	(2)	EW010192	EW010193		
*HYDRAULIC MODELS	(1)	EW010114			
*HYDRAULICS	(4)	EW009257	EW009258	EW009259	EW009260
*HYDROELECTRIC POWER	(1)	EW009997			
*HYDROGEOLOGY	(1)	EW010190			
*HYDROLOGIC CYCLE	(1)	EW009297			

*HYDROLOGY	(1)	EW010054
*HYDROSTATIC SYSTEMS	(1)	EW009257
*HYGIENE	(1)	EW010191
*IDENTIFICATION	(1)	EW009978
*ILLINOIS	(5)	EW008632 EW009989 EW009992 EW010083 EW010183
*INCINERATION	(2)	EW010096 EW010257
*INCINERATORS	(1)	EW010227
*INDIA	(1)	EW009300
*INDIANA	(1)	EW010054
*INDUSTRIAL BOILER BLOWDOWN	(1)	EW010161
*INDUSTRIAL COST RECOVERY	(1)	EW010033
*INDUSTRIAL EQUIPMENT	(3)	EW009252 EW009253 EW009254
*INDUSTRIAL PRETREATMENT	(1)	EW010027
*INDUSTRIAL RESIDUES	(1)	EW010065
*INDUSTRIAL WASTES	(23)	EW008631 EW008632 EW009316 EW009317 EW009318 EW009536 EW009961 EW010026 EW010029 EW010031 EW010033 EW010040 EW010065 EW010077 EW010089 EW010091 EW010092 EW010150 EW010162 EW010178 EW010201 EW010211 EW010249
*INDUSTRIAL WASTEWATER	(2)	EW009552 EW009554
*INDUSTRIES	(3)	EW010123 EW010124 EW010249
*INDUSTRY	(1)	EW010102
INDUSTRY	(1)	EW009962
*INFILTRATION	(3)	EW008629 EW010155 EW010234
INFILTRATION	(1)	EW009982
*INFLOW	(3)	EW008629 EW010155 EW010234
*INFORMATION SOURCES	(1)	EW010258
*INFORMATION SYSTEMS	(1)	EW010134
*INORGANIC CONTAMINANTS	(1)	EW010230
*INSECT CONTROL	(1)	EW010229
*INSECTS	(1)	EW010229
*INSITUFORM	(1)	EW010157
*INSPECTION	(5)	EW010069 EW010146 EW010155 EW010160 EW010182
INSPECTION	(1)	EW008629

*INSPECTORS (1) EW010160
*INSTRUCTION (2) EW010116 EW010125
*INSTRUCTIONAL MATERIALS (24) EW009247 EW009248 EW009250 EW009251 EW009252 EW009253 EW009254 EW009255 EW009256 EW009257 EW009258 EW009259 EW009260 EW009261 EW009523 EW009524 EW009525 EW009526 EW009527 EW009528 EW009960 EW010158 EW010244 EW010262
*INSTRUCTIONAL SYSTEMS (1) EW010124
*INSTRUMENTATION (2) EW009974 EW010153
*INSTRUMENTS (1) EW009981
*INTERACTION ANALYSIS (1) EW010127
*INTERNATIONAL AGREEMENTS (2) EW010205 EW010206
INTERNATIONAL AID (1) EW010120
*INTERNATIONAL COOPERATION (1) EW009302
INTERSTATE REST AREAS (1) EW010056
*ION SELECTIVE ELECTRODES (1) EW009553
*IRON (1) EW008643
*IRRADIATION (2) EW009526 EW009535
*IRRIGATION (6) EW009155 EW009298 EW009299 EW010093 EW010094 EW0[illegible]0232
*JAR TEST (1) EW009528
*JOB CONTROL (1) EW009998
*JOINT OPERATIONS (1) EW010183
*KINETICS (1) EW009533
*KNOWLEDGE (1) EW009297
*LABOR (1) EW010189
*LABORATORY EQUIPMENT (1) EW009553
*LABORATORY PROCEDURES (36) EW008635 EW008636 EW008637 EW008638 EW008640 EW008641 EW008642 EW008643 EW008644 EW009138 EW009139 EW009140 EW009141 EW009142 EW009143 EW009144 EW009145 EW009146 EW009147 EW009148 EW009149 EW009150 EW009151 EW009421 EW009549 EW009974 EW010062 EW010136 EW010142 EW010145 EW010151 EW010158 EW010177 EW010201 EW010203 EW010210
LABORATORY PROCEDURES (2) EW009960 EW010245
*LABORATORY STUDIES (1) EW010085
*LABORATORY TECHNIQUES (1) EW009421
*LAGOONS (1) EW010229
LAGOON SYSTEMS (1) EW010052
*LAKES (2) EW009991 EW010132

LAKES	(2)	EW009301 EW009964
*LAND APPLICATION	(4)	EW010050 EW010067 EW010218 EW010257
*LANDFILLS	(3)	EW009318 EW010212 EW010257
*LAND RECLAMATION	(2)	EW009155 EW010214
*LAND USE	(6)	EW009155 EW009466 EW010176 EW010212 EW010214 EW010256
*LAWS	(2)	EW009296 EW010206
*LEADERSHIP	(1)	EW008916
*LEARNING	(1)	EW010125
*LEARNING DISABILITIES	(1)	EW010125
*LEGAL ASPECTS	(1)	EW010133
*LEGAL PROBLEMS	(1)	EW010218
*LEGISLATION	(4)	EW009562 EW009962 EW010133 EW010218
*LIQUIDS	(1)	EW009434
*LITERATURE REVIEWS	(1)	EW010036
*MAINTENANCE	(21)	EW009524 EW009527 EW009540 EW009559 EW009975 EW009993 EW010037 EW010048 EW010069 EW010111 EW010112 EW010146 EW010152 EW010153 EW010155 EW010157 EW010182 EW010187 EW010189 EW010234 EW010263
MAINTENANCE	(2)	EW008629 EW009538
*MAINTENANCE COSTS	(1)	EW009316
*MANAGEMENT	(39)	EW008916 EW009228 EW009295 EW009299 EW009300 EW009467 EW009468 EW009469 EW009559 EW009964 EW009976 EW009983 EW009984 EW009985 EW010044 EW010054 EW010065 EW010071 EW010072 EW010081 EW010083 EW010103 EW010108 EW010113 EW010114 EW010116 EW010126 EW010129 EW010145 EW010166 EW010179 EW010181 EW010187 EW010189 EW010200 EW010204 EW010217 EW010219 EW010257
MANAGEMENT	(2)	EW009560 EW010120
*MANGANESE	(2)	EW008641 EW010168
*MANHOLES	(1)	EW009993
*MANUALS	(4)	EW009559 EW010078 EW010204 EW010210
MANUALS	(1)	EW008629
*MANUFACTURERS	(1)	EW009998
*MAPS	(1)	EW010190
*MARKETING	(2)	EW009995 EW010154
*MARYLAND	(1)	EW010228
*MASSACHUSETTS	(2)	EW008632 EW010038

*MASS MEDIA (1) EW009465
*MATERIAL SELECTION (1) EW010051
*MEASUREMENT (3) EW009974 EW010207 EW010208
*MEDIA SPECIALISTS (1) EW009226
*MEMBRANE FILTER TECHNIQUE (1) EW008644
*METAL REMOVAL (1) EW010150
*METALS (7) EW009318 EW009536 EW010050 EW010147 EW010150 EW010202 EW010211
*METERING PUMPS (1) EW010007
*METHANE (2) EW009554 EW010111
*METHANE DIGESTION (1) EW010151
*METHANE PRODUCTION (1) EW010063
*MICHIGAN (2) EW009539 EW010185
*MICROBIOLOGY (4) EW008636 EW008644 EW010064 EW010215
*MICROCOMPUTERS (1) EW009977
*MICROORGANISMS (1) EW009535
MICROORGANISMS (1) EW009554
*MINERALS (2) EW010080 EW010190
*MINE WATER (1) EW010200
*MINING (2) EW010170 EW010214
*MISSOURI (1) EW009530
*MIXERS (1) EW010009
*MODEL CALIBRATIONS (1) EW010220
*MODELS (18) EW009537 EW009539 EW009551 EW009559 EW009976 EW009990 EW010043
EW010054 EW010078 EW010079 EW010084 EW010114 EW010126 EW010134 EW010159
EW010204 EW010219 EW010220
MODELS (1) EW010149
*MOLECULAR WEIGHT (1) EW010011
*MOLLUSCS (2) EW010136 EW010131
*MONITORING (26) EW009302 EW009556 EW009979 EW009980 EW009981 EW009989 EW009990
EW009996 EW010024 EW010032 EW010069 EW010071 EW010072 EW010097 EW010098
EW010130 EW010131 EW010151 EW010155 EW010161 EW010207 EW010208 EW010212
EW010233 EW010250 EW010259
MONITORING (1) EW010215
*MOTORS (1) EW009259
*MUNICIPAL GOVERNMENT (1) EW009997

*MUNICIPALITIES	(1)	EW009560						
*MUNICIPAL WASTES	(4)	EW009316	EW009961	EW010026	EW010031			
*MUNITIONS	(2)	EW010029	EW010040					
*MVP	(1)	EW010204						
*NATIONAL ENVIRONMENTAL DATA REFERRAL SERVICE	(1)	EW010088						
*NATIONAL FOREST SERVICE	(1)	EW010160						
*NATIONAL PRIORITIES LIST	(1)	EW010176						
*NATURAL RESOURCES	(4)	EW009295	EW009298	EW009300	EW010256			
NATURAL RESOURCES	(1)	EW009301						
*NESSLER METHOD	(1)	EW009145						
*NETA	(1)	EW010116						
*NETHERLANDS	(1)	EW010080						
*NEW JERSEY	(3)	EW009531	EW010021	EW010110				
*NEW MEXICO	(1)	EW009541						
*NEWSPAPERS	(1)	EW009465						
*NEW YORK	(2)	EW009531	EW009984					
*NICKEL	(1)	EW010098						
*NITRATES	(1)	EW010029						
*NITRIFICATION	(2)	EW010038	EW010061					
*NITRITE NITROGEN	(1)	EW009146						
*NITROGEN	(5)	EW009145	EW009146	EW009533	EW010045	EW010148		
*NONFERROUS METALS	(1)	EW010202						
*NON-VOLATILE COMPOUNDS	(1)	EW010171						
*NORTHEAST UNITED STATES	(1)	EW010200						
*NUCLEAR POWER PLANTS	(1)	EW010124						
OBJECTIVES	(1)	EW010083						
*OCEANOGRAPHY	(1)	EW009149						
OCEANOGRAPHY	(7)	EW008643	EW009139	EW009140	EW009141	EW009142	EW009145	EW009148
*OCEANS	(1)	EW008638						
*ODOR CONTROL	(2)	EW010163	EW010185					
*ODORS	(3)	EW010087	EW010163	EW010185				
*OHIO	(2)	EW009982	EW009994					

*OHIO RIVER	(2)	EW009456 EW010255
*OIL	(2)	EW010210 EW010248
OIL	(2)	EW009147 EW010090
*OIL POLLUTION	(2)	EW010039 EW010089
*OIL RECOVERY	(1)	EW010042
*OIL SEPARATORS	(1)	EW010090
*OIL SHALE	(1)	EW010210
*OIL SPILLS	(7)	EW010039 EW010042 EW010053 EW010089 EW010090 EW010133 EW010169
*OILY WASTES	(1)	EW010162
*ONSITE DISINFECTION	(1)	EW010143
*ONSITE DISPOSAL	(2)	EW009524 EW010134
*ONSITE PRODUCTION	(1)	EW009994
*ONSITE SEWAGE DISPOSAL	(1)	EW009961
*ONSITE SEWAGE TREATMENT	(1)	EW009961
*ONSITE TREATMENT	(1)	EW010200
*ONSITE WASTEWATER TREATMENT	(3)	EW009964 EW009984 EW010186
*ONSITE WATER TREATMENT	(1)	EW010247
*OPERATING COSTS	(1)	EW009316
*OPERATING EXPENSES	(1)	EW010140
*OPERATIONS	(2)	EW010053 EW010090
*OPERATIONS (WASTEWATER)	(90)	EW008631 EW008632 EW009317 EW009318 EW009524 EW009528 EW009530 EW009531 EW009532 EW009534 EW009538 EW009551 EW009552 EW009961 EW009964 EW009973 EW009984 EW009985 EW009986 EW009987 EW009988 EW009994 EW010009 EW010018 EW010019 EW010020 EW010021 EW010022 EW010023 EW010025 EW010026 EW010029 EW010030 EW010031 EW010034 EW010035 EW010036 EW010037 EW010038 EW010040 EW010041 EW010045 EW010046 EW010047 EW010048 EW010049 EW010055 EW010056 EW010057 EW010058 EW010059 EW010060 EW010061 EW010065 EW010073 EW010078 EW010084 EW010085 EW010095 EW010096 EW010101 EW010110 EW010111 EW010113 EW010116 EW010118 EW010134 EW010146 EW010148 EW010150 EW010151 EW010153 EW010159 EW010162 EW010163 EW010164 EW010178 EW010181 EW010183 EW010184 EW010186 EW010187 EW010211 EW010227 EW010228 EW010229 EW010232 EW010245 EW010249 EW010250
OPERATIONS (WASTEWATER)	(1)	EW009533
*OPERATIONS (WATER)	(19)	EW009545 EW009559 EW009970 EW009973 EW009975 EW009996 EW009997 EW010009 EW010066 EW010114 EW010116 EW010118 EW010135 EW010187 EW010209 EW010215 EW010230 EW010244 EW010251
*OPERATOR CERTIFICATION	(1)	EW010144
*OPERATOR'S ATTITUDES	(1)	EW010041

*OPERATOR TRAINING (4) EW010116 EW010144 EW010146 EW010244
*ORDER ENTRY (1) EW009998
*OREGON (1) EW009961
*ORGANIC CHEMICALS (2) EW010082 EW010135
*ORGANIC COMPOUNDS (8) EW009532 EW009550 EW009558 EW009974 EW010171 EW010251 EW010254 EW010261
*ORGANIC CONTAMINANTS (1) EW010230
*ORGANIC MATTER (2) EW009532 EW009534
*ORGANIC OVERLOADS (1) EW010057
*ORGANIC WASTES (2) EW010093 EW010094
*ORGANIZATION (1) EW009228
*ORGANIZATIONAL ASSESSMENT (1) EW010126
*ORGANOHALIDES (1) EW009974
*ORSANCO (1) EW009456
*OSHA (1) EW010068
*OXYGEN (4) EW008635 EW009148 EW009534 EW010208
OXYGEN (1) EW010018
*OXYGEN SENSORS (1) EW010208
*OZONATION (1) EW010149
OZONE (1) EW009564
*PACKAGE PLANTS (2) EW010049 EW010146
*PAPER INDUSTRY (2) EW010091 EW010092
*PAPER PULP (1) EW010201
*PATHOGENS (3) EW009535 EW009563 EW009564
PATHOGENS (1) EW009526
*PERFORMANCE CHARACTERISTICS (1) EW009531
*PERFORMANCE EVALUATION (47) EW008629 EW009227 EW009228 EW009317 EW009530 EW009531 EW009539 EW009548 EW009557 EW009961 EW009977 EW009986 EW009987 EW009988 EW010018 EW010019 EW010020 EW010021 EW010022 EW010023 EW010025 EW010026 EW010030 EW010035 EW010045 EW010047 EW010050 EW010052 EW010055 EW010056 EW010058 EW010059 EW010060 EW010073 EW010090 EW010101 EW010113 EW010134 EW010135 EW010143 EW010145 EW010147 EW010148 EW016150 EW010153 EW010159 EW310249
PERFORMANCE EVALUATION (1) EW009553
*PERSONNEL (3) EW009529 EW009530 EW010179
PERU (1) EW010120

*PETROLEUM (1) EW010248
*PH (3) EW009138 EW009534 EW010061
*PHOSPHORUS (3) EW008642 EW009537 EW009991
*PHYSICS (1) EW009434
*PILOT PLANTS (3) EW010038 EW010049 EW010066
*PILOT STUDIES (2) EW010150 EW010211
*PIPE FLOW (1) EW010008
*PIPE PRESSURE RATINGS (1) EW008816
*PIPE RELINING (1) EW010157
*PIPE ROUGHNESS (1) EW010220
*PIPES (3) EW009527 EW010008 EW010157
PIPES (1) EW010166
*PIPE STANDARDS (1) EW010008
*PLANNING (27) EW009228 EW009316 EW009468 EW009469 EW009541 EW009559 EW009964 EW009984 EW009998 EW010044 EW010054 EW010065 EW010069 EW010071 EW010072 EW010108 EW010114 EW010123 EW010126 EW010129 EW010137 EW010141 EW010179 EW010186 EW010188 EW010189 EW010193
PLANNING (4) EW009560 EW010083 EW010120 EW010192
*PLANS (1) EW010083
*PLASTIC MEDIA (3) EW010026 EW010051 EW010060
*PLASTICS (1) EW010042
*PNEUMATIC POWER SYSTEMS (5) EW009252 EW009253 EW009254 EW009255 EW009256
*PNEUMATICS (2) EW009255 EW009256
*POINT SOURCE POLLUTION (2) EW010077 EW010202
*POLICIES (2) EW009296 EW010189
*POLLUTANTS (1) EW010254
*POLLUTION (18) EW009298 EW009466 EW009962 EW009971 EW009980 EW010024 EW010032 EW010062 EW010097 EW010100 EW010167 EW010176 EW010180 EW010205 EW010206 EW010214 EW010248 EW010255
*POLLUTION CONTROL (3) EW010039 EW010075 EW010092
POLLUTION CONTROL (1) EW009523
*POLLUTION DETECTION (1) EW009556
*POLYELECTROLYTES (1) EW009532

*POPULATION GROWTH (1) EW009299
*POSTSECONDARY EDUCATION (18) EW009247 EW009248 EW009249 EW009250 EW009251 EW009252 EW009253 EW009254 EW009255 EW009256 EW009257 EW009258 EW009259 EW009260 EW009261 EW010244 EW010262 EW010263

POSTSECONDARY EDUCATION (1) EW010158

*POTABLE WATER (2) EW010109 EW010209

*POWER GENERATION (1) EW009997

*POWER SYSTEMS (4) EW009252 EW009253 EW009254 EW009261

*PREDICTION (3) EW009466 EW009537 EW009539

*PRESSURE SEWERS (1) EW009538

*PRETREATMENT (2) EW008631 EW008632

*PREVENTIVE MAINTENANCE (2) EW009975 EW010234

*PRIMARY TREATMENT (1) EW010184

*PRIVATE ROLE (1) EW009983

*PRIVATE UTILITIES (1) EW010179

*PROBLEM ASSESSMENT (1) EW010081

*PROBLEM IDENTIFICATION (1) EW010044

*PROBLEMS (1) EW010234

*PROCESS CONTROLS (1) EW010073

*PROCESS DESCRIPTIONS (2) EW010159 EW010209

*PROGRAM DESCRIPTIONS (4) EW008632 EW010027 EW010088 EW010123

*PROGRAM DEVELOPMENT (1) EW010027

*PROGRAM DUMPS (1) EW009977

*PROGRAM EVALUATION (1) EW008632

*PROJECT DEVELOPMENT (1) EW009541

*PUBLIC HEALTH (11) EW009535 EW009564 EW009964 EW009984 EW010080 EW010082 EW010117 EW010128 EW010191 EW010193 EW010215

PUBLIC HEALTH (4) EW010065 EW010120 EW010176 EW010192

*PUBLIC ROLE (1) EW009983

*PULP INDUSTRY (4) EW010091 EW010092 EW010201 EW010249

*PULP MILLS (1) EW010250

*PUMP DESCRIPTIONS (1) EW010007

*PUMPING (1) EW009982

*PUMP OPERATIONS (1) EW010112

*PUMPS	(3)	EW009258 EW010007 EW010112
*PUMP SELECTION	(1)	EW010112
*PURCHASING	(1)	EW009998
*PVC PIPES	(1)	EW008816
*PYROLYSIS	(1)	EW010210
*QUALITY ASSURANCE	(1)	EW010145
*QUALITY CIRCLES	(1)	EW010126
*QUALITY CONTROL	(2)	EW009983 EW010145
*QUANTITATIVE RISK ASSESSMENT	(1)	EW010068
RADIOACTIVITY	(1)	EW010215
*RATES	(2)	EW010033 EW010095
*RECIPROCITY	(1)	EW010144
*RECLAMATION	(1)	EW009978
*RECOMMENDATIONS	(10)	EW009537 EW009961 EW009964 EW009979 EW010037 EW010046 EW010117 EW010147 EW010149 EW010215
RECOMMENDATIONS	(1)	EW010068
*RECORD KEEPING	(1)	EW009996
*RECORDS	(1)	EW009996
*RECOVERY SYSTEMS	(1)	EW009536
*RECREATIONAL AREAS	(1)	EW010052
*RECREATIONAL WATER	(1)	EW009992
*RECYCLING	(4)	EW009468 EW010028 EW010056 EW010200
*REFERENCE MATERIALS	(1)	EW010186
*REGIONAL PLANNING	(1)	EW010189
*REGULATIONS	(13)	EW009318 EW009562 EW009962 EW009990 EW009992 EW010032 EW010068 EW010133 EW010142 EW010146 EW010188 EW010202 EW010230
*REHABILITATION	(7)	EW009993 EW009997 EW010069 EW010155 EW010182 EW010231 EW010263
*REMODELING	(1)	EW010183
*REMOTE SENSING	(1)	EW010214
*REMOTE SENSING TECHNIQUES	(2)	EW010071 EW010072
*REPORTS	(4)	EW010081 EW010205 EW010207 EW010208
*REQUIREMENTS	(1)	EW010088
*RESEARCH	(12)	EW009532 EW009533 EW009534 EW009535 EW009536 EW009537 EW009547 EW009553 EW009970 EW010130 EW010131 EW010248

RESEARCH (1) EW010245
*RESEARCH NEEDS (4) EW009970 EW010129 EW010188 EW010200

*RESEARCH REPORTS (53) EW009317 EW009465 EW009466 EW009558 EW009988 EW009989 EW009991
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EW010039 EW010044 EW010045 EW010049 EW010054 EW010067 EW010073 EW010075
EW010079 EW010084 EW010085 EW010092 EW010094 EW010095 EW010098 EW010099
EW010100 EW010101 EW010102 EW010103 EW010128 EW010132 EW010142 EW010143
EW010147 EW010148 EW010149 EW010150 EW010167 EW010169 EW010170 EW010171
EW010201 EW010209 EW010211 EW010213 EW010214 EW010261

*RESEARCH REVIEWS (1) EW010055

*RESERVOIRS (6) EW009300 EW009301 EW009469 EW010217 EW010219 EW010261

*RESIDUAL CHLORINE (1) EW009989

*RESIDUES (1) EW009149

*REST AREAS (1) EW010056

*REUSE (1) EW010028

*RISK (1) EW009992

*RISK ASSESSMENT (1) EW010082

*RIVERS (6) EW009456 EW009469 EW010132 EW010200 EW010217 EW010255

RIVERS (1) EW009301

*ROADS (1) EW010213

*ROADSIDE PARKS (1) EW010037

*ROTATING BIOLOGICAL CONTACTORS (15) EW009533 EW010022 EW010029 EW010030 EW010035 EW010038 EW010040
EW010041 EW010045 EW010046 EW010047 EW010049 EW010057 EW010058 EW010061

*ROTATION (1) EW009988

*ROTOSCREENS (1) EW010021

*RUHR RIVER (1) EW009983

*RUNWAYS (1) EW010213

*RURAL AREAS (8) EW009964 EW009984 EW010146 EW010186 EW010187 EW010188 EW010189
EW010247

RURAL AREAS (1) EW010120

*SAFETY (2) EW010156 EW010233

SAFETY (2) EW010158 EW010245

*SALARIES (1) EW009529

*SALT MARSHES (1) EW010169

*SAMPLING (29) EW008635 EW008636 EW008637 EW008641 EW008642 EW008643 EW008644
EW009139 EW009140 EW009141 EW009142 EW009143 EW009144 EW009145 EW009146

EW009148 EW009149 EW009150 EW009151 EW009547 EW009974 EW009979 EW009990
EW010050 EW010089 EW010132 EW010142 EW010177 EW010259

SAMPLING (1) EW009147

*SANITARY LANDFILLS (1) EW010212

*SANITARY WASTES (1) EW010056

SANITATION (3) EW010120 EW010192 EW010193

*SAUDI ARABIA (1) EW010046

*SCIENCES (1) EW009296

*SCIENTISTS (1) EW009297

*SCOTT PAPER COMPANY (1) EW010123

*SEA WATER (10) EW008638 EW008643 EW009139 EW009140 EW009141 EW009142 EW009145
EW009148 EW009149 EW010136

*SEA WATERS (1) EW008640

*SECONDARY DISCHARGES (1) EW009989

*SECONDARY EDUCATION (1) EW009960

*SEDIMENTATION (2) EW010130 EW010131

*SEDIMENTS (1) EW009991

*SELENIUM (2) EW010099 EW010100

*SENSORY EVALUATION (1) EW010087

*SEPTIC TANKS (3) EW009524 EW009961 EW010034

SEPTIC TANKS (1) EW010052

*SEWAGE (4) EW010089 EW010093 EW010094 EW010096

SEWAGE (1) EW010095

*SEWAGE TREATMENT (1) EW010096

*SEWER OVERFLOW (1) EW009539

*SEWER REHABILITATION (1) EW008629

*SEWER PEPAIR (1) EW010182

*SEWERS (9) EW008629 EW009540 EW009993 EW010069 EW010152 EW010155 EW010182
EW010233 EW010234

SEWERS (2) EW009538 EW010166

*SHIPS (2) EW010053 EW010096

*SHOCK LOADING (1) EW010049

*SIMULATION MODELING (1) EW010114

*SIMULATIONS (3) EW010043 EW010054 EW010204

*SITE ANALYSIS (1) EW009964
*SITE PREPARATION (1) EW010259
*SITE SELECTION (1) EW010134
*SLUDGE (16) EW008631 EW009318 EW009526 EW009534 EW009535 EW009554 EW009995 EW010058 EW010064 EW010067 EW010073 EW010110 EW010154 EW010227 EW010228 EW010257
SLUDGE (1) EW010158
*SLUDGE DEWATERING (1) EW010228
*SLUDGE DRYING (1) EW010227
*SMALL SYSTEMS (1) EW010048
*SMOKE (1) EW009421
*SNOW (1) EW010213
*SNOW REMOVAL (1) EW010213
*SOCIETAL PROBLEMS (1) EW009962
*SODIUM HYPOCHLORITE (1) EW009994
*SOIL ABSORPTION (1) EW010134
*SOIL PURIFICATION METHOD (1) EW010048
*SOILS (2) EW009155 EW010067
*SOLAR ENERGY (1) EW010109
SOLAR ENERGY (1) EW010117
*SOLID WASTES (1) EW010116
*SOLUBILITY (1) EW010011
*SOM-A-SYSTEM (1) EW010110
*SOUTH DAKOTA (1) EW010027
*SPADNS METHOD (1) EW009144
*STABILIZATION PONDS (2) EW010146 EW010229
*STANDARDS (9) EW009562 EW010008 EW010077 EW010167 EW010168 EW010202 EW010206 EW010215 EW010254
*START-UP (2) EW009985 EW010049
*STATE DATA (1) EW010190
*STATE-OF-THE-ART REVIEWS (1) EW010036
*STATE PLANS (1) EW010083
*STATE REPRESENTATIVES (1) EW010118
*STATE ROLE (2) EW009984 EW010133

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STATE ROLE (1) EW010144
*STATISTICAL MODELS (1) EW009990
*STATISTICS (1) EW009990
*STREAMS (3) EW009989 EW010161 EW010207
*STRIP MINING (2) EW010170 EW010214
*SULFATES (1) EW009150
*SULFIDES (1) EW009993
*SULFITE (1) EW009151
*SUPERFUND (1) EW009971
*SUPERVISION (1) EW008916
*SURFACE RUNOFF (2) EW009295 EW009539
SURFACE WATER (1) EW010251
*SURVEILLANCE (1) EW010146
*SURVEYS (5) EW009468 EW009561 EW009973 EW010155 EW010190
SURVEYS (2) EW008629 EW010052

*SYMBOLS (2) EW009256 EW009261
*TABLES (1) EW010008
*TANKS (1) EW009258
*TEACHER BEHAVIOR (1) EW010127
*TECHNICAL ASSISTANCE (2) EW009530 EW010146
*TECHNOLOGY (16) EW008631 EW009296 EW009548 EW009552 EW010039 EW010042 EW010064 EW010066 EW010165 EW010166 EW010182 EW010188 EW010208 EW010209 EW010250 EW010259
*TECHNOLOGY TRANSFER (1) EW010165
*TELEVISION (1) EW010182
*TEMPERATURE (2) EW009533 EW009980
*TENNESSEE (3) EW008632 EW009468 EW010044
*TERRACE PASTURES (1) EW009557
*TEST METHODS (1) EW009421
*THEORY (1) EW009257
*THM (2) EW009550 EW010261

*TOTAL SOLIDS (1) EW010181
*TOTAL VOLATILE SOLIDS (1) EW010181
*TOXICITY (8) EW010075 EW010097 EW010098 EW010099 EW010100 EW010167 EW010168 EW010254
*TOXICOLOGY (5) EW009421 EW009549 EW009555 EW009558 EW010082
*TOXIC SUBSTANCES (3) EW009962 EW010130 EW010131
*TOXIC SUBSTANCES CONTROL ACT (1) EW009962
*TRAINERS (1) EW010116
*TRAINING (14) EW009226 EW009227 EW009985 EW010116 EW010118 EW010123 EW010124 EW010125 EW010144 EW010146 EW010183 EW010187 EW010233 EW010244
TRAINING (3) EW009302 EW010120 EW010245
*TRAINING PROGRAMS (3) EW010123 EW010124 EW010160
*TREE ROOTS (1) EW010152
*TRENDS (1) EW010138
*TRICKLING FILTERS (5) EW009317 EW009531 EW010038 EW010060 EW010229
TRICKLING FILTERS (1) EW010019
*TRIHALOMETHANES (2) EW009550 EW010261
*TRITIUM (1) EW009982
*TROUBLESHOOTING (5) EW009255 EW009260 EW009261 EW009985 EW010057
*TUNNELS (1) EW010263
*ULTRAVIOLET RADIATION (1) EW010143
UNITED NATIONS (1) EW009302
*URBAN AREAS (2) EW010044 EW010129
*U.S. ARMY (1) EW010109
*US EPA (1) EW010176
*USER CHARGES (2) EW010033 EW010095
*UTILITIES (4) EW010124 EW010137 EW010179 EW010187
*VALUES (1) EW009523
*VALVES (3) EW009254 EW009259 EW010008
*VENDORS (2) EW009227 EW009998
*VIDEOCASSETTES (3) EW010255 EW010256 EW010257
*VIDEODISCS (1) EW009977
*VIOLATIONS (1) EW010035

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*VIRGINIA (1) EW009975
*VIRUSES (1) EW009535

*VOLATILE COMPOUNDS (1) EW010171

*WASP (1) EW010204

*WASTE DISPOSAL (27) EW008631 EW009466 EW009526 EW009535 EW009557 EW009980 EW009995
EW010050 EW010064 EW010065 EW010067 EW010083 EW010091 EW010093 EW010094
EW010096 EW010110 EW010166 EW010176 EW010193 EW010201 EW010205 EW010212
EW010227 EW010228 EW010232 EW010257

WASTE DISPOSAL (1) EW010192

*WASTE DISPOSAL SITES (2) EW009980 EW010166

*WASTE REMOVAL (3) EW010147 EW010167 EW010168

*WASTES (1) EW010170

WASTES (1) EW009960

*WASTE TREATMENT (2) EW010091 EW010166

*WASTEWATER (26) EW008635 EW008636 EW008637 EW008638 EW008640 EW008642 EW008644
EW009138 EW009139 EW009140 EW009141 EW009142 EW009143 EW009144 EW009145
EW009146 EW009148 EW009149 EW009150 EW009151 EW010007 EW010050 EW010089
EW010136 EW010177 EW010210

WASTEWATER (1) EW009147

*WASTEWATER COLLECTION (12) EW008629 EW009538 EW009539 EW009540 EW009561 EW009993 EW010069
EW010152 EW010155 EW010182 EW010233 EW010234

*WASTEWATER MANAGEMENT (1) EW010081

*WASTEWATER TREATMENT (131) EW008631 EW008632 EW009316 EW009317 EW009318 EW009456 EW009524
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EW009538 EW009548 EW009551 EW009552 EW009554 EW009557 EW009560 EW009561
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EW010210 EW010211 EW010218 EW010227 EW010228 EW010229 EW010231 EW010232
EW010245 EW010249 EW010250 EW010257

WASTEWATER TREATMENT (1) EW009536

WASTEWATER UTILITIES (1) EW010112

*WATER (25) EW008635 EW008636 EW008637 EW008638 EW008640 EW008641 EW008642

EW008643 EW008644 EW009138 EW009139 EW009140 EW009141 EW009142 EW009143
EW009144 EW009145 EW009146 EW009148 EW009149 EW009150 EW010007 EW010136
EW010138 EW010203

WATER (4) EW009147 EW009151 EW009960 EW010158

*WATER ANALYSIS (1) EW009974

*WATERBORNE DISEASES (1) EW010191

*WATER CHARACTERISTICS (1) EW010190

*WATER CHEMISTRY (1) EW010062

*WATER CODES (1) EW009467

*WATER CONSERVATION (3) EW009467 EW009468 EW010056

*WATER COSTS (1) EW008815

*WATER DEMAND (2) EW009559 EW010219

*WATER DISTRIBUTION (4) EW009559 EW010114 EW010220 EW010244

WATER DISTRIBUTION (1) EW010166

*WATER HARDNESS (1) EW010080

*WATER HEATERS (1) EW010109

*WATER HYACINTH (2) EW010220 EW010101

*WATER INVENTORY (1) EW009996

*WATER LAW (1) EW010103

*WATER NETWORKS (1) EW010220

*WATER PIPES (1) EW009527

*WATER POLLUTION (9) EW009549 EW009960 EW010024 EW010075 EW010079 EW010161 EW010170
EW010205 EW010212

*WATER POLLUTION CONTROL (10) EW009978 EW009980 EW010032 EW010044 EW010161 EW010180 EW010202
EW010206 EW010248 EW010255

*WATER QUALITY (51) EW008640 EW008644 EW009302 EW009456 EW009537 EW009539 EW009550
EW009562 EW009563 EW009960 EW009970 EW009974 EW009979 EW009983 EW009990
EW009991 EW009992 EW010024 EW010032 EW010044 EW010062 EW010063 EW010071
EW010072 EW010080 EW010083 EW010087 EW010101 EW010103 EW010117 EW010130
EW010131 EW010132 EW010135 EW010142 EW010143 EW010158 EW010177 EW010180
EW010190 EW010193 EW010203 EW010204 EW010206 EW010207 EW010208 EW010210
EW010215 EW010254 EW010258 EW010261

WATER QUALITY (2) EW009538 EW010192

*WATER RATE INDEXING (1) EW010140

*WATER RATES (7) EW008815 EW010102 EW010138 EW010139 EW010140 EW010141 EW010188

*WATER RESOURCE DEVELOPMENT (1) EW009972

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*WATER RESOURCES          (34)      EW009155  EW009295  EW009296  EW009297  EW009298  EW009299  EW009300
                          EW009301  EW009456  EW009467  EW009541  EW009559  EW009960  EW009972  EW009978
                          EW009983  EW010043  EW010054  EW010083  EW010093  EW010129  EW010137  EW010170
                          EW010188  EW010190  EW010200  EW010204  EW010217  EW010218  EW010219  EW010247
                          EW010255  EW010256  EW010258

 WATER RESOURCES          (3)       EW009302  EW009982  EW010158

*WATER REUSE              (6)       EW009468  EW009552  EW010028  EW010056  EW010093  EW010094

*WATER RIGHTS             (3)       EW009541  EW010103  EW010218

*WATER SERVICE            (1)       EW010139

*WATER STORAGE            (1)       EW010219


*WATER SUPPLY             (38)      EW009155  EW009295  EW009297  EW009298  EW009299  EW009300  EW009301
                          EW009467  EW009468  EW009541  EW009564  EW009972  EW009978  EW009982  EW010043
                          EW010054  EW010080  EW010082  EW010102  EW010108  EW010109  EW010129  EW010138
                          EW010140  EW010187  EW010188  EW010189  EW010190  EW010191  EW010193  EW010215
                          EW010217  EW010218  EW010219  EW010220  EW010247  EW010251  EW010261

 WATER SUPPLY             (2)       EW010120  EW010192

*WATER SYSTEMS            (1)       EW010189

*WATER TREATMENT          (36)      EW009528  EW009545  EW009550  EW009555  EW009559  EW009960  EW009970
                          EW009973  EW009975  EW009982  EW009983  EW009996  EW009997  EW010009  EW010010
                          EW010011  EW010066  EW010116  EW010118  EW010128  EW010135  EW010142  EW010143
                          EW010156  EW010158  EW010160  EW010179  EW010187  EW010191  EW010209  EW010215
                          EW010230  EW010244  EW010247  EW010251  EW010261

*WATER USE                (3)       EW009469  EW010083  EW010220

*WATER UTILITIES          (6)       EW009970  EW010108  EW010137  EW010139  EW010141  EW010179

 WATER UTILITIES          (1)       EW010112

*WATER WELLS              (1)       EW009972

*WATMAN                   (1)       EW009559

*WEIRS                    (1)       EW010008

 WELLS                    (1)       EW009982

*WEST VIRGINIA            (1)       EW010146

*WETLANDS                 (4)       EW009523  EW009525  EW009551  EW010081

*WET WELLS                (1)       EW010164

 WILDLIFE                 (1)       EW009523

*WISCONSIN                (2)       EW010113  EW010145

*WORLD PROBLEMS           (7)       EW009155  EW009295  EW009296  EW009299  EW010191  EW010193  EW010215

 WORLD PROBLEMS           (1)       EW010192

*WPCF                     (1)       EW010245
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*WRITERS	(1)	EW009226
*ZETA POTENTIALS	(1)	EW009528
*ZINC	(2)	EW008637 EW010147